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MAY 1990





DECISION NOTICE FINDING OF NO SIGNIFICANT IMPACT

and



INTERIM STANDARDS AND GUIDELINES FOR THE

PROTECTION AND MANAGEMENT OF RCW HABITAT

WITHIN 3/4 MILE OF COLONY SITES



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United States Department of Agriculture Forest Service Regional Office 1720 Peachtree Rd., NW Atlanta, Ga. 30367

Reply to: 1920/1950/2600

Date: May 9, 1990

Dear Reader:

Enclosed for your information is a Decision Notice (DN), Finding of No Significant Impact (FONSI), and the Environmental Assessment (EA) for the interim standards and guidelines for the protection and management of red-cockaded woodpecker (RCW) habitat within 3/4 mile of colony sites.

The Decision Notice documents my decision for amending affected Forest Plans with additional standards and guidelines for protecting and managing RCW during the interim period until long-range RCW protection and management strategies are developed. The Decision Notice identifies the alternative selected and states the reasons for selecting the alternative.

Please feel free to contact your local Forest Service office if you have any questions regarding this Decision Notice.

¹JOHN E. ALCOCK Regional Forester

Enclosure

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PART I - DECISION NOTICE

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PART I - DECISION NOTICE

A. INTRODUCTION

This decision notice identifies the alternative selected for implementation as interim standards and guidelines for protection and management of red-cockaded woodpecker (RCW) habitat within 3/4 mile of RCW colony sites. The environmental assessment (EA) prepared for the Interim Standards and Guidelines does not disclose site-specific environmental analysis. Site-specific analyses and the appropriate National Environmental Policy Act (NEPA) documentation will be done at the project level to insure compliance with NEPA, Endangered Species Act (ESA) and any other applicable laws. The alternative to be implemented will apply to the area within 3/4 mile of active and inactive RCW colonies on National Forest System (NFS) lands with RCW populations of less than 250 active colonies. Included are RCW populations on National Forests in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, and Tennessee.

This decision notice completes Phase 2 of a 3-phase process to develop and implement new long-range RCW protection and management guidelines. To comply with all applicable laws and regulations and to gain public involvement into the endeavor, we are following the Environmental Impact Statement (EIS) process as outlined by NEPA regulations. Since this process is expected to take about two years to complete, two interim phases (Phase 1 and 2) were developed. These phases were designed to provide protection and habitat management to benefit RCW until the EIS process is complete and a new long-range RCW management strategy is implemented. The following is a brief explanation of the 3 phases:

Phase 1 - began when the *Policy on Cutting Within 3/4 Mile of RCW Colonies on Existing Timber Sale Contracts* was issued on March 27, 1989. This policy established new protection measures for RCW. The Policy was urgent and temporary until additional analysis could be done and Phase 2 implemented.

Phase 2 - documented in the Decision Notice is the development and implementation of Interim Standards and Guidelines for Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites. Phase 1 stressed protection. Phase 2 continues the emphasis on protection, and provides additional management options. Phase 2 will be in effect until Phase 3 is implemented.

Phase 3 - is the development and implementation of long-range RCW protection and management guidelines, for which an EIS is being prepared. (Federal Register, Vol. 54, No. 86, May 5, 1989)

As stated on page 2 of the EA, the interim standards and guidelines do not apply to all RCW colonies in the Southern Region. Populations with more than 250 active colonies and colonies on the National Forests in Texas are excluded. However, these populations could be included under the interim standards and guidelines at a later date if new information becomes available indicating a need to include them. Since these populations are not within the scope of the EA, a supplement to the EA would be prepared. The supplement would disclose and analyze the environmental consequences of implementing the standards and guidelines on both the RCW and other environmental resources within the area being considered.

We currently know of two situations that may require supplementing the EA. One involves the RCW populations in Texas. Texas RCW colony and habitat management is currently following a court ordered plan. We have appealed the Court's ruling to the 5th Circuit Court of Appeals. Should the court return management of RCW habitat within 3/4 mile of colony sites in Texas to the discretion of the Forest Service, we will supplement the EA to include these colonies under the interim standards and guidelines.

The second possible addition is the Vernon-Kisatchie-Evangeline population on the Kisatchie National Forest in Louisiana. This population was excluded because it exceeds 250 active colonies. However, in their concurrence letter, the USDI Fish and Wildlife Service (F&WS) recommended that this population be considered 3 populations. (See F&WS letter of March 2, 1990, Appendix C.) We are taking action based on this recommendation and have begun the necessary analysis. If this population is split into three separate populations, each would have less than 250 active colonies and, therefore, fall under the interim standards and guidelines. Because this area is currently excluded from the EA, a supplement would be prepared to include the Vernon-Kisatchie-Evangeline RCW population area.

B. ALTERNATIVES CONSIDERED

Seven alternatives were developed based on public issues, management concerns, and existing RCW information.

Two alternatives were eliminated from detailed analysis (see EA, item II., EA-6). They were:

 No cutting within 3/4 mile of RCW colonies during the interim period. (This alternative responded to issue 3.)

Implementing this alternative would likely contribute to the continued decline of the small RCW populations. Management of RCW habitat, including cutting, is critical in enhancing existing habitat through the removal of mid-story encroachment in the colony site. It is also necessary to provide future suitable habitat and protect the existing habitat from insects and disease.

Implement an uneven-aged management silvicultural system within 3/4 mile of RCW colonies.

Changing to an uneven-aged silvicultural system during the time the interim standards and guidelines will be in effect, would not be feasible. Major changes in stand inventory, regeneration, treatments and monitoring would be required to ensure that overall forest productivity and viability remains high. The time it would take to develop and implement these changes would likely be longer than the interim standards and guidelines would be in effect. We will consider uneven-aged management as we analyze the long term direction in the upcoming months.

Five alternatives were analyzed in detail in the EA. All alternatives are consistent with the direction in Chapter 420 - Red-Cockaded Woodpecker, of the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R). Mitigating measures were developed and incorporated into each description of the alternatives based on the management options available under that alternative rather than having a separate listing of mitigating measures. A brief summary of each alternative follows (EA, item II., pages EA-7-17, for detailed description):

Alternative 1 - No action. Management direction and mitigating measures follow Chapter 420 of the Forest Service Wildlife Habitat Management Handbook, FSH 2609.23R. Direction is the same as that prior to the issuance of the March 27, 1989, Policy on Cutting Within 3/4 Mile of RCW Colonies. Timber harvest is allowed through thinning, clearcutting and shelterwood/seed-tree harvest in both the 1/4 mile and 1/4-3/4 mile zones provided adequate foraging habitat is provided and colony sites are not isolated. Cutting for management other than timber, i.e., recreation, oil/gas exploration, etc., requiring clearings less than and larger than 10 acres is not specifically addressed and will be coordinated at the project level. Retention of relict trees and/or potential cavity trees is not addressed. Management objectives for foraging habitat is tied to acres by providing 125 acres of pine or pine-hardwood forest which are 30 years old or older, 40% (50 acres) of which must be 60 years old or older, within 1/2 mile of and contiguous with the colony site.

Alternative 2 - Management and mitigation follow the "Proposed Action-Interim Policy on Cutting Within 3/4 Mile of RCW Colonies", that was distributed with the July 7, 1989, scoping letter for this EA. Thinning of timber stands is emphasized with provisions to protect potential nesting habitat. Within the 1/4 mile zone, clearcutting is allowed, with mitigation, only to convert off-site pine species back to longleaf pine. In the 1/4-3/4 mile zone, clearcutting can also be used to regenerate slash pine on wet sites and understocked or damaged stands not identified as foraging habitat, i.e., less than 24 stems 10 inches or greater diameter at breast height per acre.

Shelterwood/seed-tree cutting is not silviculturally appropriate for stand conditions where regeneration is allowed in the 1/4 mile zone, but is allowed with mitigation in the 1/4-3/4 mile zone if 50% or more of the suitable habitat remains in the 60 year or older age classes. Clearings less than 10 acres for resource management other than timber are allowed in the 1/4 mile zone if criteria for clearcutting within that zone are met. Such clearings greater than 10 acres are not allowed in the 1/4 mile zone. In the 1/4-3/4 mile zone, clearings less than and larger than 10 acres are allowed if mitigation outlined in FSH 2609.23R is met. Under all cutting methods, future nesting habitat is provided through retention of relict trees and potential cavity trees. Foraging habitat management objectives are tied to availability of suitable foraging substrate, ensured by identifying enough acreage to provide at least 6350 pine stems greater than or equal to 10 inches DBH and 8490 square feet of pine basal area (BA) within 1/2 mile of and contiguous with the colony site.

Alternative 3 - This alternative is based upon Alternative 2 as modified by public, other agency, and internal Forest Service input. This is the preferred alternative.

Within the 1/4 mile zone, thinning is emphasized with provisions to protect potential nesting habitat. Regeneration utilizing the clearcut method is allowed only to convert sites occupied by offsite species back to longleaf pine. No more than 25% of the area can be less than 30 years old and no more than 8.5% can be in the 0-10 year age class. This converts to a maximum clearcut size of 10.6 acres, assuming the entire 1/4 mile zone (approximately 125 acres) is suitable habitat and there are no other non-stand size temporary openings due to

insects, disease, or other resource management activities. There are also additional guide-lines to ensure adequate foraging, prevent habitat fragmentation and prevent isolation of recruitment/replacement (R/R) stands. There are also provisions to retain potential cavity trees. No regeneration using the seed-tree/shelterwood methods will occur within 1/4 mile zone. Existing seed-trees or shelterwood will not be cut during the interim period. Clearings less than 10 acres for resource management other than timber should be located outside the 1/4 mile zone if possible. If such clearings must be located within this zone, the criteria for clearcutting will be followed. No clearings greater than 10 acres for other resource management will be allowed. No regeneration or clearing for any purpose is to occur in the oldest 1/3 of the suitable habitat acreage. One third of the acres within 3/4 mile of RCW colonies containing the oldest stands will be retained for potential nesting habitat.

In the area between 1/4 and 3/4 mile from the colony thinning criteria are the same as in the 1/4 mile zone. Use of the clearcut method for regeneration is expanded to include other stand conditions where natural regeneration is not feasible. These conditions are limited to slash pine on very wet sites, sparse stands or damaged stands with 24 or less stems per acre greater than 10 inches DBH that are unsuitable or not needed for foraging habitat. Mitigation is the same as in the 1/4 mile zone. In addition, regeneration areas will average no more than 25 acres. Retention of the oldest stands totaling at least 1/3 of the suitable habitat within 3/4 mile criteria applies.

Stand regeneration using the shelterwood and seed-tree methods are allowed within the 1/4 to 3/4 mile zone to provide longterm RCW benefits. A sustained flow of habitat into the future for RCW requires that a portion of the habitat in excess of the current population needs be regenerated. Mitigation measures are the same as for clearcutting with the exception that the 25 acre limitation is not applicable because of the residual trees remaining on the regeneration area. Seed-trees will not be removed during the interim period. The minimum leave basal areas for seed-trees vary by species. For loblolly and shortleaf pine, it is 30 sq. ft./ac. For longleaf and slash pine, it is a range of 25-40 sq. ft./ac. with direction to use the highest possible BA for each specific site to benefit the bird and still achieve seedling establishment and development. It is important to use the highest BA possible to offset natural mortality due to insects, wind or lightening. This higher BA also reduces forest fragmentation which is an important factor in the smaller populations that have relatively isolated colonies.

Clearings for non-timber management purposes in the 1/4-3/4 mile zone, both less and greater than 10 acres, are permitted, but must meet the same criteria as for clearcuts in this zone.

Within the entire 3/4 mile zone foraging habitat is tied to the availability of suitable foraging substrate. A minimum of 6350 pine stems greater than or equal to 10 inches DBH and 8490 square feet of pine BA within 1/2 mile of and contiguous with the colony site should be provided.

This alternative also allows for the selection and management of corridors to maintain habitat continuity between colonies, even though these areas are outside the specified 3/4 mile zones.

Alternative 4 - This alternative follows the criteria for management activities with appropriate mitigation identified in item 5, "Proposed Sales" on page 5 of the Policy for Cutting Within 3/4 Mile of RCW Colonies issued March 27, 1989. Thinning is allowed following criteria

described in Alternative 2. Clearcutting is allowed, with mitigation, in both the 1/4 mile and 1/4-3/4 mile zones to convert off-site pine back to longleaf pine and to regenerate understocked and damaged stands not needed for foraging habitat. Shelterwood/seed-tree regeneration cutting is not allowed. Criteria for cutting for resource management other than timber management is the same as Alternative 1 in both zones. Future cavity trees will be retained as described under Alternative 2. Foraging habitat would be managed as described under Alternative 1.

Alternative 5 - This alternative will allow only thinning as described under Alternative 2. No clearings will be allowed. Retention of future cavity trees when thinning and management of foraging habitat will follow the direction under Alternative 2.

C. DECISION

My decision is to amend the affected forest plans with the standards and guidelines as described in Alternative 3 with two minor modifications from the description of Alternative 3 in the EA of January 1990. These modifications are:

- 1. The maximum amount of temporary openings with trees less than 10 years of age within 3/4 mile of RCW colonies is reduced from 10% to 8.5% of the suitable habitat acreage.
- 2. The leave basal area for regenerating longleaf pine using the shelterwood method is changed from a minimum of 40 sq. ft./ac. to a range of 25-40 sq. ft./ac.

The following discussion explains the changes to Alternative 3 and provides reasons why they were made:

Change 1 - In the EA of January 1990, Alternative 3 allowed a maximum of 10% of suitable habitat to be in the the regeneration stage (0-10 year age class) within 1/4 mile and between 1/4 and 3/4 mile of RCW colonies. We inventory and prescribe needed management in each of our forest stands at least every 10 years. Theoretically, we could regenerate 1/10 of the acreage every 10 years. This equates to a rotation age of 100 years. The F&WS recommends in their concurrence letter (Appendix C, March 2, 1990 letter) that the maximum allowable amount in regeneration be reduced to 8.5 percent or approximately 1/12 of the suitable habitat. Therefore, the change equates to extending the rotation age to 120 years. F&WS recommend this rotation length during the interim period in order to preserve future options for rotation length that will be developed and analyzed in the EIS for long-term management options. In addition, this lengthening of rotation will reduce the probability of habitat fragmentation or colony isolation. Because long-term management options will consider rotation lengths by tree species and site quality, I agree with F&WS that this change to Alternative 3 would be prudent during the interim period.

Change 2 - When we regenerate forest stands naturally using the seed-tree method, some of the mature trees are left on site to provide seed for seedlings that will make up the new stand of trees. In the EA of January 1990, Alternative 3 required a minimum of 40 square feet of basal area per acre to be left when longleaf pine stands are regenerated naturally. If the average diameter of the stand is 14" in diameter at breast height (dbh), approximately 37 trees per acre would be left on site at the 40 square feet per acre density. We now have information indicating that leaving 40 square feet of basal area per acre on some sites will hamper longleaf seedling establishment and development. This would occur because the mature trees would compete with the seedlings for sunlight and their roots for soil nutrients

and moisture. In addition, the needles dropped by the greater number of mature trees will make prescribed burning difficult to manage at intensity levels that will not damage the seedlings. A basal area range will provide more flexibility for the diversity in longleaf sites, however, it will also be utilized for the benefit of the bird and the highest possible BA for each specific site will be retained. This will insure quality foraging habitat while also producing viable seedlings for regeneration of the stand. It would be possible to leave 40 sq. ft. BA on all sites and re-enter the stands following the interim to remove additional trees if seedlings were not being established. However, studies indicate that the damage to seedlings just getting established from logging equipment can be significant. Therefore, I believe we can best enhance our seedling establishment opportunities by cutting to a basal area initially that would limit the number of times logging equipment disturbs the site.

During the interim period, we will only regenerate stands within 3/4 mile of RCW colonies if two primary criteria are both met by the proposed action. These criteria are: (1) the current population of RCW will not be adversely affected by the action, and (2) future RCW colonies will benefit. If we can meet the first criteria, but adequate natural regeneration is not established as a result of the number of mature trees left on site, then we would not meet our second objective. Therefore, in order to increase our chances of meeting the second objective while still adhering to the first, I have modified the leave basal area for the shelterwood method in longleaf to a range of 25-40 square feet per acre. The effects of this basal area range of was analyzed under Alternative 2 in the EA. Using the example again of a stand with trees averaging 14" dbh, this basal area range would result in leaving approximately 24 to 37 trees per acre. This range of basal areas provides the land manager more flexibility to adapt these guidelines to a greater variety of sites where longleaf stands occur and reduce crown and root competition from the mature trees. Even if the low end of the range (in the example, approximately 24 trees per acre) is necessary, the stand will still provide foraging and potential nesting habitat for RCW while seedlings are being established underneath. The mature trees will not be removed during the interim period, therefore, this change will not increase the potential for habitat fragmentation or colony isolation. This is particularly important in the small RCW populations that have relatively isolated colonies. In the past, RCW have colonized the seed-tree/shelterwood trees. If this occurs, that portion of the regeneration area will be designated as a RCW colony site and managed and protected as such. There are concerns that if colonized, the fewer number of trees per acre left under these basal area guidelines may cause long-term adverse affects on the RCW because of natural tree mortality. Long term observations of mature pine mortality in the southeast have shown that we can expect a mortality rate of 0.2 trees per acre per year. This translates to an average loss of one tree per acre every five years. Even at the low end of the basal area range, we will have ample time to establish and maintain a recruitment stand adjacent to the colony site before natural mortality significantly affects the colony site.

D. REASONS FOR THE DECISION

I selected alternative 3 as modified because I believe it provides the best opportunity among the alternatives analyzed, to protect and manage RCW and its habitat during the interim period while still allowing for multiple use resource management on the National Forests.

In making this decision, I carefully considered the analysis in the EA and the determination in the EA biological evaluation that Alternative 1 (no action), "will likely adversely affect the RCW in those populations with less than 50 active colonies and may adversely affect those popula-

tions with 50-250 active colonies." (Appendix B, pg. B-15, section V. Determination of Effect.) Although Alternative 1 would implement our current handbook direction for which we have a non-jeopardy opinion rendered in 1985, new information has come to light that indicates the protection and management provisions in the handbook may need supplementation to address present circumstances in those populations with 250 active colonies or less. As you see from the population trend graphs, generated from the new information presented on pages B-5 through B-7 of Appendix B, all but one of these smaller populations appear to be declining.

Although monitoring and studies are continuing, preliminary indications point to two primary reasons for this decline. The first primary reason for the decline is mid-story encroachment. The second is the shortage of potential cavity trees. Other potentially significant problems include population fragmentation, foraging habitat fragmentation, colony isolation, and genetic and demographic problems. (Biological Evaluation, pgs. B 13-15 Appendix B). Alternatives 2-5 use the current handbook as a foundation but add additional protection and management direction to address each of these possible reasons for the decline. I believe Alternative 3 provides the best mix of provisions that can be used as standards and guidelines on the National Forests during the interim period until the long-range protection and management direction can be developed and set in place. The handbook direction was designed several years ago to maintain and increase RCW. Since the handbook was not designed to address declines in the RCW populations, additional measures are needed. Alternative 3 supplements the handbook direction with short-term protection and management needed to stabilize declining populations under current habitat and population conditions. This is our first and primary objective for the interim standards and guidelines. Second, where the bird's habitat needs are known, we can begin the long-range management necessary to meet future needs of the RCW, and achieve and maintain our population objectives.

I want to emphasize that our commitment to protecting and managing RCW and its habitat has not changed under this alternative. The first two questions our land managers will ask when considering any proposed action, be it a timber harvest or constructing a new hiking trail within 3/4 mile of a RCW colony under Alternative 3 will be:

- Can we implement this proposed action without adversely affecting a RCW colony?
- 2. Will there be a short or long-range benefit to RCW as a result of this action?

An affirmative answer is mandatory for the first question. If the proposed action is likely to adversely affect RCW, it will not be considered further. However, since we manage on the National Forest for multiple uses, there will be occasions when we can answer the first question "yes", but since the primary benefit is aimed at another resource management objective. Therefore, question 2 may have a negative reply. A hiking trail within 3/4 mile of but outside a colony would be an example.

However, a proposed action relating to thinning or stand regeneration is considered, an affirmative response is required for *both* questions. We must be able to implement the action without adversely affecting RCW and the action must provide either short or long-range RCW benefits. Regeneration cutting primarily falls in the long-range benefit category. In analyzing significant amounts of RCW habitat during the development of the EA, it became apparent that there are opportunities where stand regeneration could be accomplished without affecting current RCW's to enhance future RCW habitat. There has been considerable concern associated with regeneration cutting, especially clearcutting, during the interim. Clearcutting is necessary for converting stands back to longleaf pine and for regenerating stands that are

severely damaged or sparse. However, these conditions are relatively rare. In fact, clearcutting for these purposes was also an option of the March 27, 1989, Policy but has yet to be used. We are maintaining our schedule of examining our forest stands and to date we have not identified any stands and habitat conditions that meet all the criteria for regeneration within 3/4 mile of RCW colonies. It's anticipated that there will be very few identified during the interim period. However, because significant long-term benefits could be obtained without adverse effects to the current populations of RCW if the criteria are met, I think it is necessary to continue this management option.

Much of the National Forest land throughout the south was acquired in the 1920's and 30's after having been heavily cut by their previous owners. These cut-over lands were soon reforested, and consequently, a large percentage of this area is now occupied by stands in the 60 and 70 year age classes. Although these stands are just now reaching an age of suitability for RCW nesting habitat, our knowledge of tree physiology indicates that attempts to retain these large acreages of basically even-aged trees will eventually spell disaster for the RCW. When these stands reach physiological rotation, i.e., begin to die of old age, the loss of suitable RCW habitat could be quite widespread and rapid and, thus, disastrous to the bird. This phenomenon could be especially pronounced where the health of the forest is not good because other pine species occupy longleaf sites. Unfortunately, this a condition encompass much of the RCW's range.

Our inventory and analysis data indicates this phenomenon is already occurring. We have identified stands within 3/4 mile of RCW colonies that are occupied by off-site pine species, in which tree mortality is accelerating at a very rapid pace. When site-specific analyses are done at the project level, we anticipate more areas in this condition to be identified. In addition, there are damaged and/or sparse stands providing little or no suitable RCW habitat. Regeneration of such stands during the interim period can speed up their return to a condition suitable for the RCW. Therefore, I believe it behooves us to plan now for the future in these situations and maintain the management options to ensure there is enough suitable habitat available to not only meet our RCW population objectives but support them through time.

I selected Alternative 3 over Alternative 1 because our analysis in the EA and BE indicates that under current population and habitat conditions more protection and intensity of RCW management is needed than what is provided by the RCW handbook chapter, in order to stop the current declines in populations with less than 250 active RCW colonies. The most significant shortcoming of Alternative 1 is the lack of protection of relict trees and other potential cavity trees (BE, Appendix B, pg. B-13, 2nd paragraph under item B). Also, under Alternative 1, clearcutting may be more widely used within 3/4 mile of colony sites which could fragment foraging habitat (BE, Appendix B, pg. B-14, item E).

I selected Alternative 3 over Alternative 2 because Alternative 3 provides more protection for potential nesting habitat within 3/4 mile of RCW colonies. Alternative 3 protects the oldest 1/3 of the suitable habitat within 3/4 mile. Alternative 2 requires that 50% of the suitable habitat remain in the 60 year or older age class after any treatment. It also requires that regeneration occur in the predominant and not necessarily the oldest age class. However, under Alternative 2, there are circumstances where the oldest stands could be cut and the 50% criteria will be met. For example, if there were 30% of the suitable habitat within 3/4 mile in the 71-80 year age class; 25% in the 81-90 year age class; and 10% in the 91-100 year age class; then provided other criteria are met, regeneration cutting could be planned in any one of these age classes as long as 50% of the 60+ age classes are retained. Under Alternative 3, a major portion of the 81-90 year age class and all of the 91-100 year age class would be protected.

I selected Alternative 3 over Alternative 4 because Alternative 3 offers more protection and management measures than Alternative 4. Under Alternative 4, colony site protection measures, foraging habitat management and RCW monitoring guidelines would follow the existing Forest Service Handbook Direction (FSH 2609.23R). As stated in my reasons for selecting Alternative 3 over Alternative 1, I feel additional protection and management measures are now needed to ensure the declining trends of our smaller RCW populations is stopped. The protection and management guidelines under Alternative 3 are much more comprehensive due to additional information and input from the public, individuals from our agency, and other public agencies. Alternative 3 also allows us to take advantage of opportunities to provide suitable habitat for future RCW populations if the current populations are unaffected by such actions. Alternative 4 was primarily designed as an immediate action to afford protection to the RCW until we could do further analysis, get additional input, and develop a short-term management policy that would more comprehensively protect current populations.

I selected Alternative 3 over Alternative 5 because Alternative 5 does not allow any habitat regeneration for future RCW colonies to occur during the interim period. Alternative 5 was developed from public input that wanted no regeneration of habitat within 3/4 mile of colonies. However, significant input was also received concerning the need to enhance and increase the longleaf ecosystem where possible that is preferred by RCW. One of the primary ways of accomplishing this is by converting longleaf sites that were cut and planted years ago with another pine species, back to longleaf. Because of the difficulty and length of time involved in establishing longleaf regeneration, past forest management practices often substituted another pine species such as slash pine for longleaf after the stand was harvested. Sites were often classified for management according to the predominant species growing there. For instance, if a stand was predominantly loblolly, then it was classified a loblolly site, if predominantly slash pine, then it was classified as a slash pine site, etc. In the last 10 years, however, our foresters have been utilizing available advanced technology and looking at other site characteristics such as soil type and topography when classifying site. Consequently, in the last five years, we have experienced a 10% increase in sites classified for longleaf management. This acreage is expected to continue increasing as more and more stands are examined through the compartment prescription process. These sites may have another species of pine growing on them now but the soils, topography and other characteristics indicate that it was once a longleaf pine site and, with the longleaf classification, will be returned or converted back to longleaf pine following scheduled harvest of the off-site pine. Another indication of our efforts to increase or reclaim longleaf sites is the amount of longleaf pine planted annually. This acreage has increased each year since 1980 when 3,890 acres of longleaf pine were planted to 1988 when 11,780 acres were planted. Selection of Alternative 5, would forego the opportunities to convert these longleaf sites back to longleaf where it is needed the most, within 3/4 mile of RCW colonies. Alternative 5 would also not allow for the regeneration of pine stands that are unsuitable conditions as RCW habitat. These are pine and pine-hardwood stands that are damaged and/or extremely sparse due to natural factors such as insects, wind, and fire. Finally, Alternative 5 foregoes the opportunity for natural regeneration where it can be accomplished without adversely affecting existing RCW.

Finally, I selected alternative 3 because I believe it best meets the intent of the laws and regulations governing Forest Service operations including:

- 1. The Endangered Species Act. 16 U.S.C. 1531, et seq.
- 2. The National Environmental Policy Act. 42 U.S.C. 4321, et seq.
- 3. The National Forest Management Act. 16 U.S.C. 1600, et seq.
- 4. The Multiple-Use Sustained Yield Act, 16 U.S.C. 528, et seq.

E. PUBLIC INVOLVEMENT

A. Response to issues and concerns in the EA

In July of 1989, scoping letters were sent to approximately 14,500 interested and affected individuals and organizations throughout the Southern Region. They were invited to submit their issues and concerns on the proposed RCW management changes within Region 8. In addition, news articles informing and inviting the public to participate in the process, were distributed Region-wide. We received 124 letters during the 45 day comment period and from the analysis of the comments, 6 Major Issues and 5 Management Concerns were identified (Appendix B, EA pages B-5 & 6). The Major Issues and Management Concerns and a response to each follows:

ISSUE 1 - Include all RCW populations on National Forests under interim policy.

RESPONSE: When the information regarding the declining trend of the smaller RCW populations came to light, there was an immediate concern for *all* RCW populations. Survey and monitoring activities were stepped up for all populations. While it was determined that populations with less than 250 active colonies were declining, the larger populations (greater than 250 active colonies) were either stable or increasing. We therefore, are concentrating our efforts and resources, during the interim period, on the smaller populations. The intensified surveying and monitoring efforts will continue to apply to all populations to ensure that this stable or increasing trend exhibited by the larger populations continues.

Subissue a - New studies indicate 250 clans may be insufficient to maintain a viable population.

RESPONSE: Given the short period of time the interim guidelines will be in effect, this issue was not addressed in the EA. It will, however, be considered as we develop long-term direction. At present, the Fish and Wildlife Service's RCW recovery plan identifies 250 active colonies as a viable population.

Subissue b - Birds will be removed from larger populations to support the declining populations. Therefore, these larger populations should be given the additional protection provided by the interim guidelines.

RESPONSE: Granted, these are the populations which will be supporting augmentation efforts, but in no instance, will enough sub-adult females be removed from a population to negatively impact it. I am confident that for the short duration of the interim guidelines the larger populations can continue to sustain our augmentation efforts as they have in the past.

ISSUE 2 - Consider the adverse socio-economic effects of reducing timber cut on the National Forests.

Subissue a - Economic impacts to timber industry.

RESPONSE: Alternative 3 will provide for the needs of the smaller RCW populations and, as indicated in the EA, impact the projected timber harvest volumes (pg. EA-49 & 50) the least of the other alternatives considered, except the no action alternative (Alternative 1). In most instances, the majority of the timber used by industry is harvested from industry lands or private lands. National Forest System lands make up less than 4 percent of the commercial forest lands in the Southern Region and the area within 3/4 mile of RCW colonies is only 5.3 percent of the National Forest System lands. It is anticipated, therefore, that the overall impacts to the timber industry in the Southern Region will be minimal as a result of implementing Alternative 3. However, there are a small number of communities which may be impacted by the reduced timber harvest in their radius of operation if substitute timber is not provided. Such areas will be identified and every effort made to provide the needed raw materials from suitable National Forest lands outside the RCW management areas. In addition to providing timber outside RCW management areas to mitigate impacts to these communities, our thinning program within the management areas will be increased and should further mitigate possible economic impacts.

Subissue b - Regional and local socio-economic impacts to timber industry related to employment.

RESPONSE: The effects of implementing Alternative 3 on local communities in the Southern Region dependent on a forest products industry could be greater than the overall effects discussed under Subissue a., above. There could be instances within the Region where employment in small rural communities largely dependent on the flow of raw materials from the National Forest adjacent to the community, could be affected if the interim standards and guidelines disrupt the flow of raw materials. We will look closely at these areas at the project level in the site-specific analysis. Every effort will be made in the short term to provide the needed raw materials from suitable National Forest lands outside the 3/4 mile boundary from RCW colonies or from thinning volume within 3/4 mile of colony sites.

Subissue c - Reduction of 25% fund payment to the States.

RESPONSE: Since the 25% fund payment to States is tied to the amount of timber sold from National Forest system lands, there could be a reduction in these payments if there is a reduction in the amount of timber sold as a result of implementing Alternative 3 as interim standards and guidelines. However, as discussed under Subissue b., above, efforts will be made to avoid any significant reductions in the 25% fund payment to States by locating opportunities to sell and harvest National Forest timber outside the 3/4 mile boundary from RCW colonies and stepping up our thinning activities where possible within 3/4 mile of colony sites.

Subissue d - 3/4 mile zone around colonies is excessive and wastes taxpayers money.

RESPONSE: The input we have received has been divided. Some individuals believe the provisions to protect RCW is excessive and wastes taxpayers money while

others believe we should do more. We are bound by law to protect this and other threatened or endangered species regardless of cost. Alternative 3 provides this protection while providing for multiple resource management during the interim period. Suitable nesting habitat within 3/4 mile of each colony is recommended by the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R) and the Fish and Wildlife Service RCW Recovery Plan to enhance colonization and provide for recruitment.

ISSUE 3 - Prohibit all cutting and protect existing habitat until EIS is completed.

RESPONSE: This was an alternative that was considered but eliminated from further analysis. It was eliminated because this alternative would not allow implementation of habitat management enhancement techniques that are necessary for stopping the RCW population decline. (See EA, pg. EA-7, no. 1 under the Alternatives Considered But Eliminated From Further Analysis)

ISSUE 4 - Modify existing timber management within 3/4 mile of RCW colonies.

Subissue a - Change from clearcutting and even-aged management to selection cutting and uneven-aged management.

RESPONSE: This was an alternative that was considered but eliminated from further analysis. It was eliminated because it is not feasible to implement this alternative in the limited time the interim standards and guidelines will be in effect. (See EA, pg. EA-7 no. 2 under the Alternatives Considered But Eliminated From Further Analysis)

Subissue b - Change basal area (BA) guidelines to lower thinning BA's and raise shelterwood regeneration BA's.

RESPONSE: The basal area ranges were determined by the silvics of specific tree species, site quality, and the biological needs of RCW. Basal area recommendations were expressed as a range so they can be appropriately implemented over the diverse sites found in the Southern Region. As stated in the second change to Alternative 3, (pg DN-5), the seed-tree/shelterwood basal areas for longleaf pine were changed to a range in order to ensure seedling establishment and development on some of our sites.

Subissue c - Extend rotation ages.

RESPONSE: Alternative 3 provides for retaining the oldest 1/3 of the suitable habitat within 3/4 mile of colony sites during the interim period, regardless of age. Change 1 to Alternative 3 (pg DN-5) reduces the amount of suitable habitat acres that can be regenerated (0-10 year age class) from 10% to 8.5% of the total. This effectively extends the rotation age in the suitable habitat to 120 years during the interim period.

Subissue d - Re-establish more longleaf and associated species ecosystems and protect existing ones.

RESPONSE: Alternative 3 provides the opportunity to convert stands of pine occupying longleaf sites back to longleaf during the interim period if it is determined that

existing RCW would not be adversely affected and this conversion would benefit RCW. In addition, there are provisions under Alternative 3 for protecting and retaining the longleaf pine component when cutting is proposed within 3/4 mile of RCW colony sites.

Subissue e. - Remove mid-story gradually or not at all.

RESPONSE: The effects of mid-story encroachment in the colony site on the RCW is well documented. Responses to the scoping request covered a wide spectrum, from those desiring no midstory removal to those preferring total removal. Although the RCW experts all agree that mid-story control is necessary, there is disagreement on how it should be accomplished. Some researchers feel that total removal over a short period of time can cause colony site abandonment; however, our experience with such short term removals have indicated a strong positive response by the birds. Alternative 3 calls for more intensive mid-story control over a larger area than does Alternative 1.

Subissue f - No southern pine beetle (SPB) control.

RESPONSE: The analysis in the SPB EIS and the information/data we have available indicates the Integrated Pest Management program, being implemented by the Forest Service, can protect and preserve RCW habitat. The direction in the SPB FEIS and ROD will be followed to ensure SPB spot suppression is necessary and can be carried out without adversely affecting RCW.

Subissue g - Do not follow existing handbook direction for any aspect of interim guidelines.

RESPONSE: The handbook was prepared in compliance with F&WS's RCW Recovery Plan. F&WS rendered a biological opinion that implementation of the handbook would not jeopardize the continued existence of RCW. Given the new information available concerning declines in our RCW populations with less than 250 active colonies, Alternative 3 establishes standards and guidelines that supplement the handbook (FSH 2609.23R). This additional specific direction for protecting and managing RCW habitat within 3/4 mile of the colony sites is needed for these smaller populations. The handbook direction is suitable for the larger populations and with the supplemental direction provided by Alternative 3 will be suitable for all populations during the interim period.

Subissue h - Clearcut areas should be reduced in size.

RESPONSE: Alternative 3, as modified, restricts the size of clearcut areas within 1/4 mile of the colony site by limiting the amount of suitable habitat that can be in the 0-10 age class to 8.5% of the area. For instance, the area within 1/4 mile of a colony site is approximately 125 acres. Therefore, the maximum size of regeneration area within 1/4 mile of a colony site would be 10.6 acres assuming that all the 125 acres is suitable habitat, and there were no other stands or temporary openings in the 0-10 year age class. However, it is unlikely that the maximum would be cut. Not all the 125 acres may be suitable habitat and other stand or non-stand size openings that are in the 0-10 year age class caused by SPB, for instance, would be considered in the 8.5% limitation. For example, if only 120 acres were in suitable habitat

due to hardwood inclusions or stream courses, and there were a total of 10 acres of SPB spots scattered throughout the 1/4 mile zone, then no regeneration would be allowed because the 8.5% limitation in the 0-10 year age class was taken up by the SPB spots..

Between 1/4 and 3/4 mile of the colony site, the 8.5% limitation still applies plus maximum clearcut area size will average about 25 acres. This limitation on clearcut size will also reduce the potential for habitat fragmentation while allowing the local manager the flexibility to delineate stands along recognizable on-the-ground boundaries.

Subissue i - Don't manage circles, manage blocks identifiable on the ground.

RESPONSE: Designation of management areas for RCW habitat that have recognizable boundaries on the ground will take considerable survey and analysis and, therefore, was not feasible during the interim period. However, the need for doing this has been recognized and will be addressed in the EIS.

Subissue j - Manage according to site and condition of RCW and its habitat.

RESPONSE: Where applicable, the specific guidelines, such as basal areas for thinning, are expressed in ranges that will allow the flexibility to adapt to the varying site conditions and tree species. This flexibility will allow for the maintenance of a healthy forest habitat for RCW which in turn will increase the health of the RCW population.

Subissue k - Specify foraging needs in trees per acre and diameter class rather than basal area.

RESPONSE: Alternative 3 specifically states a minimum of 6,350 pine trees equal to or greater than 10 inches DBH and a total pine BA of 8,490 square feet are needed within 1/2 mile and contiguous to the colony site (see EA, Table 2, Item IV, page EA-29).

ISSUE 5 - Increase survey so National Forest RCW colonies are located and protected. Increase monitoring so various forest management practices can be adequately evaluated.

RESPONSE: Survey methods have been intensified. A 100% transect will be done in compartments entered each year for the preparation of a silvicultural prescription. A 100% transect will also be done in the sample compartments used to predict population trends in the populations with over 100 active colonies. Emphasis will be placed on completing surveys on unsurveyed suitable habitat. Monitoring will be increased so that each colony will be checked annually to determine colony status and the presence of birds.

ISSUE 6 - Impacts to non-timber and non-RCW resources.

RESPONSE: Although no significant impacts were identified in the EA, additional analysis at the project level will be required to assess the potential environmental impacts including non-timber and non-RCW resources. This will be done through a site-specific analysis

with appropriate NEPA documentation and a Biological Evaluation before any action is taken.

MANAGEMENT CONCERN 1 - The alternative would not likely adversely affect RCW or violate the Endangered Species Act.

RESPONSE: The biological evaluation attached to the EA as Appendix A also states that "Alternatives 2 through 5 are not likely to adversely affect the RCW and will actually benefit it." It indicates that the 5 alternatives considered are not likely to adversely affect any of the other 6 threatened or endangered species found in RCW habitat. (Appendix B, Section V. Determination of Effect, pg. B-15) The Fish and Wildlife Service has concurred that Alternative 3 is not likely to adversely affect the RCW. (See Appendix C, FWS letter of concurrence.)

MANAGEMENT CONCERN 2 - The alternative would not affect the overall character of the area surrounding RCW colonies to the extent that other management for RCW cannot be considered in the amendment process for the Regional Guide.

RESPONSE: Because of the limited amount of area that could possibly be cut within 3/4 mile of RCW colonies due to the requirements imposed by Alternative 3, the overall character of the area surrounding RCW colonies will not change appreciably during the interim period (approximately 2 years). Therefore, other types of management considered during the amendment process for the Regional Guide will not be foregone as a result of implementing Alternative 3 during the interim period.

MANAGEMENT CONCERN 3 - The alternative would consider the zone within 1/4 mile of the colony center to be the most sensitive to potential impacts such as habitat fragmentation, colony isolation, and foraging habitat depletion.

RESPONSE: Alternative 3 specifically addresses each of these potentially impacting concerns and provides criteria against which all proposals involving cutting of suitable habitat will be evaluated to ensure the RCW will not be adversely affected. (EA, item b., pg. EA-14; item b., pg. EA-15; item c., pg. EA-16; item d., pg EA-16)

MANAGEMENT CONCERN 4 - The alternative would consider the zone within 3/4 mile of the colony center important for future colonization and population recruitment.

RESPONSE: Alternative 3 provides specific direction to provide suitable nesting habitat critical to enhance future colonization and population recruitment within 3/4 mile of RCW colonies. The order of priority for tree retention when stands are thinned is: (1) relict trees; (2) potential cavity trees; (3) trees 10 inches and greater DBH that are not potential cavity trees and; (4) trees less than 10 inches DBH. (EA, item a., pg. EA-14)

Alternative 3 contains numerous provisions or mitigating measures to consider when stand regeneration is considered within 3/4 mile of colony sites. Those described under Management Concern 3 apply. In addition, others such as limiting the size of clearcuts, excluding cutting in the oldest stands, limiting the amount of non-foraging habitat by limiting the area that can be in regeneration, and the retention of relict trees, potential cavity trees, and pine inclusions within areas to be cut, are all measures that will enhance future colonization and population recruitment. (EA, pgs. EA-14-17)

MANAGEMENT CONCERN 5 - The alternative would be consistent with the direction in the RCW Chapter of the Wildlife Habitat Management Handbook (FSH 2309.23R), while providing additional protection and management guidelines as identified in the EA.

RESPONSE: Alternatives 2-5 are consistent with the direction in the Forest Service Handbook (2609.23R) and offer additional management measures for the smaller RCW populations in order to prevent any further population decline during the interim period. (EA, para. 4, pg EA-10)

B. Response to Public Comments on the EA

In January, 1990, the EA was sent out for public review and comment. Notices of the EA's availability for a 30-day comment period was published in the Federal Register and in newspapers across the Region. We received 165 comment letters, all of which were analyzed. Based on pertinent recommendations, I have modified the alternative for which I had expressed a preference prior to the public review. We have also made minor changes in the EA for clarity or added additional information to enhance understanding. (See errata sheet, Appendix A, for listing of changes that were made to the EA of January 1990).

These concerns were raised as a result of the public review of the EA.

Concern 1: Clearcutting should be halted.

This method of stand regeneration is included as an option in Alternatives 1-4, for converting "off-site pine" on longleaf sites back to longleaf pine provided the specific protection criteria are met. Conversions will occur, during the interim period, only when the site-specific analysis indicates that long-term benefits can be gained without adversely affecting the current RCW population. The March 27, 1989, Policy (Atl. 4), now in effect, also contains the option to convert stands back to longleaf pine using the clearcut method. However, our schedule of forest stand examinations has not identified any stands meeting the criteria for regeneration using the clearcut method since the March 27, 1989, Policy has been in effect and I anticipate that there will be a limited amount of stand conversion during the interim period.

Concern 2: Unevenaged management should be used.

This silvicultural system will likely be analyzed as an alternative for the EIS. (See page DN-2 under II, Alternatives Considered, for reasons why uneven-aged management was not considered for the interim policy.)

Concern 3: Retain the leave trees on shelterwoods or seed-tree cuts indefinitely.

During the interim, all leave trees will be retained.

Concern 4: Rotation ages of foraging stands should be lengthened.

As stated on page DN-12, under Issue 3, Subissue c, Alternative 3 requires a 1/3 of the acreage containing the oldest suitable habitat within 3/4 mile of colony sites be retained, regardless of age. This alternative has also been modified to reduce the amount of acreage that can be regenerated which effectively extending the rotation age in the suitable habitat to 120 years during the interim period. Additional changes brought about through Section 7 consultation with the U.S. Fish and Wildlife Service has further reduced the amount of regeneration permissible within 3/4 mile of the colony site from 10% to 8.5%.

Concern 5: Habitat linkages should be provided between colonies.

Alternative 3 provides for corridors or linkages between colonies. (See EA description of Alternative 3, pages EA-14-17)

PART II. - FINDING OF NO SIGNIFICANT IMPACT (FONSI)

A. Findings

I have determined that overall, the actions allowed under alternative 3 (as modified), are not a major federal action and will not significantly affect, either individually or cumulatively, the quality of human environment. This decision makes no irreversible or irretrievable commitments of resources. Further site-specific analysis with appropriate NEPA documentation is required at the project level for each proposed action within 3/4 mile of RCW colonies. Any known irreversible or irretrievable commitment of resources and the significance of the potential impacts will be identified and assessed at that time.

I considered the following factors in making the determination that implementing the modified Alternative 3 as the interim standards and guidelines to protect and manage RCW colony sites will have no significant impact:

- 1. Public health and safety will not be significantly affected by any of the activities that could occur under alternative 3 provided the appropriate guidelines are followed.
- 2. No unique characteristics of the geographic area will be affected by any of the actions allowed under alternative 3.
- 3. The effects from the actions allowed under alternative 3 are not likely to be highly controversial. Controversy exists for some options allowed under alternative 3 such as regeneration cutting or midstory removal. However, the activities allowed under the interim standards and guidelines are based on the biology of the bird and its habitat needs and are designed with appropriate mitigating measures to stabilize the declining populations. The management activities for which there is controversy will not be allowed unless the site-specific analysis clearly shows that the existing RCW will not be adversely affected. If this determination can not be made, then the action will not be implemented.
- 4. Implementing Alternative 3 will not involve highly uncertain, unique, or unknown environmental risks. A site-specific analysis will be conducted for all proposed projects. Any proposed activity, which could adversely impact the RCW, will require a determination of "not likely to adversely affect" in a documented biological evaluation, and concurrence by the USDI Fish and Wildlife Service with this determination prior to implementation to insure minimal environmental risks to RCW.
- 5. Selection of alternative 3 will not set precedent for future actions with significant effects. The actions allowed under alternative 3 were designed to be temporary, implemented only until long-term directions can be developed. It is possible that particular protective measures or management actions effective in protecting the RCW or its habitat during the interim period may be adopted in the long-term management strategy. However, in developing the long-term direction, additional analyses will be done. Any actions or mitigating measures carried over from the interim guidelines will be based on the latest research literature and field data recorded during the interim and will not be based on a precedent established during the interim period.
- 6. The potential cumulative effects were evaluated in the Environmental Assessment and it was determined that by limiting time and space where actions could occur during the interim period

and by increasing monitoring to evaluate the actions and their effects, that the cumulative effects would not be significant.

- 7. No adverse effects to any historic places or loss of scientific, cultural, or historic resources will occur due to implementing this alternative.
- 8. Implementing this alternative will not adversely affect endangered, threatened, or sensitive species, wildlife habitat, or unique natural plant communities. (Appendix B, pg. BE-8)
- 9. If the guidelines are followed, none of the protection or management activities allowed for RCW under alternative 3 will result in or threaten a violation of Federal, State, or local law protecting the environment.

B - IMPLEMENTATION

This decision may be implemented no sooner than 7 days, beginning the day after the legal notice of this decision is published in a newspaper of general circulation. (36 CFR 217.10) It should be pointed out that this decision is only the first step of a two step decision making process and does not involve ground disturbing activities or an irreversible or irretrievable commitment of resources. The second step decision will be made at the project level based on a site-specific environmental analysis and appropriate NEPA documentation.

C - FOREST PLAN

This decision amends the forest-wide standards and guidelines for those Forest Plans that were included within the scope of the environmental analysis. (See Appendix D) The interim standards and guidelines set out in this decision notice are direction for the protection of the RCW. These standards and guidelines do not change the suitable timber lands on the affected Forests, as harvest for timber production purposes may continue in the areas where these standards and guidelines apply. These standards and guidelines also do not alter the allowable sale quantities of the Forests, as we cannot determine that these short-term standards and guidelines will cause shortfalls in the timber outputs expected over this short portion of the planning periods of the Forests.

Pursuant to 36 CFR 219.10(f) I have determined that these interim standards and guidelines do not significantly amend the affected Forest Plans. I have based this determination on the criteria for determining significance of change to Forest Plans found in the Forest Service Manual at 1922.5 and in Section 5.32 of Forest Service Handbook 1909.12.

The effects of this decision, including both environmental consequences and the effect on the timber sale program, on each affected National Forest will be monitored and evaluated during project level planning and decision making as required by the Forest Plan. For each forest, if monitoring and evaluation show that changes to the suitable lands, allowable sale quantity or any other resource management are necessary, further amendment or revision of the Forest Plan will be required.

D - RIGHT TO ADMINISTRATIVE APPEAL

This decision is subject to appeal pursuant to 36 CFR 217. Any written notice of appeal of this decision must be fully consistent with 36 CFR 217.9, "Content of Notice of Appeal", including

the reasons for appeal and must be filed with the Chief of the Forest Service, F. Dale Robertson, U.S. Department of Agriculture, South Building, 12th and Independence Ave., S.W., Washington D.C., 20250, no later than 45 days, beginning the day after the legal notice of this decision is published. Simultaneously send a copy of the notice of appeal to my office: Regional Forester, Region 8, 1720 Peachtree Rd. N.W., Atlanta, GA., 30367-9102.

For additional information concerning this decision or the Forest Service appeal process, contact David P. Smith, 1720 Peachtree Rd. N.W., Atlanta, GA., 30367-9102; phone: 404-347-4338.

JOHN E. ALCOCK

Regional Forester

Date

PART III - ENVIRONMENTAL ASSESSMENT

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INTRODUCTION

This Environmental Assessment (EA) documents the results of an environmental analysis of 5 alternatives developed as interim standards and guidelines for Red-cockaded Woodpecker (RCW) habitat protection and management within 3/4 mile of RCW colonies. This EA does not disclose site-specific environmental impacts. The selected alternative will provide standards and guidelines for future site-specific project analysis and appropriate documentation under the National Environmental Policy Act (NEPA). Each project level proposal will also require compliance with the Endangered Species Act (ESA). ESA compliance requires a biological evaluation to determine the affect on RCW and other endangered, threatened or sensitive species and species proposed for listing under one of these categories that could be affected by a project level proposal. In addition, the site-specific analysis will be conducted in compliance with the National Forest Management Act (NFMA) and any other applicable laws. The selection of an alternative other than Alternative 1, will require an amendment to the Land and Resource Management Plans for the affected National Forests.

The interim standards and guidelines will be in effect until the Regional Guide Environmental Impact Statement (EIS) is supplemented and the Regional Guide amended with new RCW protection and management standards and guidelines. The analysis process for completing the EIS is expected to take about 2 years.

I. NEED FOR THE PROPOSAL

Proposed Action - The proposed action is to establish interim regional standards and guidelines for RCW habitat protection and management within 3/4 mile of active and inactive RCW colonies in RCW populations with less than 250 active colonies. The interim standards and guidelines will be in effect until the analysis process is completed for the EIS supplement and Forest plans are amended to include the new RCW protection and management standards and guidelines.

Need - Recent RCW surveys indicated a decline in the number of active colonies for most of the RCW populations with less than 250 active colonies. A majority of these populations are small (less than 50 active colonies) and have a high risk of extirpation. The primary cause of these declines is believed to be from mid-story encroachment of vegetation in the colony sites. Other factors that may be contributing to these declines are isolation and demographic problems, lack of potential cavity trees, genetic problems, cavity competition, loss of cavity trees and habitat fragmentation. The Regional Forester decided immediate action was needed to stabilize these populations and new long-range standards and guidelines for RCW management should be developed to reverse this decline and to progress toward achieving RCW population objectives. Consequently, a 3-phase process was established.

Phase 1, began with the development and issuance of the "Policy on Cutting Within 3/4 Mile of RCW Colonies on Existing Timber Sale Contracts", March 27, 1989. This policy provided criteria for modifying existing timber sales within 3/4 mile of RCW colonies as necessary to protect RCW habitat. The Policy was an urgent and temporary action designed to stabilize the declining RCW populations, maintain the environmental status quo, and protect RCW habitat until "Interim RCW Guidelines", as stated in the Policy, could be developed and implemented through Phase 2 of the process.

Phase 2, consists of an analysis to develop and implement "Interim RCW Guidelines" for which this Environmental Assessment was prepared. Now titled "Interim Standards and Guidelines for Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites", these interim standards and guidelines provide habitat protection and management direction based on additional analyses and public input. These interim standards and guidelines are also temporary, and will be in effect while the long-range RCW management standards and guidelines for the southern national forests are being developed. Like the March 27, 1989, Policy, the alternatives considered for interim standards and guidelines were developed to "ensure that any action authorized, funded, or carried out by [the Forest Service] is not likely to jeopardize the continued existence of" the RCW (ESA Sec. (a)(2); 16 USC 1536(a)(2). Phase 2 will be in effect until Phase 3 is completed in approximately 2-3 years.

Phase 3, consists of an analysis to develop and implement long-range management direction to promote the recovery of RCW populations. Phase 3 began in May 1989, when a Notice of Intent to prepare a supplement to the FEIS for the Southern Regional Guide was published in the Federal Register. Completion of the supplement to the Regional Guide EIS is necessary before the Regional Guide can be amended. The amendment to the Regional Guide will establish long-term management direction for the RCW. Once the Southern Regional Guide is amended, the RCW Chapter of the Wildlife Habitat Management Handbook, FSH 2609.23R, will be revised accordingly.

Scope of the Analysis - The scope of the analysis and the decision to be made are limited. The direction will be limited to RCW habitat (pine and pine-hardwood) within 3/4 mile of active and inactive RCW colonies in populations with less than 250 active colonies. (see Table 1, pg. 3). This involves all of the populations on National Forests in the Southern Region except the Apalachicola population in Florida, and the Vernon-Kisatchie-Evangeline population in Louisiana. These populations have more than 250 active colonies and are excluded because the short-term objective of the interim standards and guidelines is to stop declines and protect those populations with a high risk of extirpation. The Apalachicola and Vernon-Kisatchie-Evangeline populations appear to be stable or increasing and do not require additional protection to maintain their population levels during the interim period. The National Forests in Texas are also excluded. These National Forests are operating under a court ordered plan for RCW management.

The scope of this proposal is limited to consideration of RCW habitat protection and management standards and guidelines as they apply to proposed activities that may affect RCW or its habitat within 3/4 mile of the colony site. These activities include cutting for timber management or for other purposes such as oil and gas exploration. It is limited in time to about 2 years or when the long-range standards and guidelines are established through amendment to the Regional Guide. As with other proposed projects that were not specifically disclosed in Forest Plans and their EIS's, any action proposed within 3/4 mile of RCW colonies will require further site-specific (project level) compliance with the National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), and Endangered Species Act (ESA). Compliance with other applicable laws will also be required.

The 3/4 mile area is divided into two zones. These are within 1/4 mile of a colony center and between 1/4 and 3/4 mile of the center. Suitable foraging habitat within 1/4 mile of each colony is critical in sustaining that colony. However, all area within 1/2 mile of the colony would be utilized when calculating available foraging. Suitable nesting habitat within 3/4 mile of each colony is recommended by the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R) and the RCW Recovery Plan to enhance colonization and provide for recruitment. Because RCW management objectives are different in each zone, they are identified separately and specific habitat management direction and mitigation measures are provided.

TABLE 1 - COLONIES TO BE AFFECTED BY POLICY

	POPULATION			
NATIONAL FORESTS	OBJECITVE	NUMBER	OF COLONIES	S 1989 1/
	Active Colonies	Active	Inactive	Total
1. Bankhead NF (AL)	50	0	8	8
2. Bichville NF (MS)	286	88	105	193
3. Caney RD, Kis. NF. (LA)	20	0	3	3
4. Catahoula-Winn RD, Kis. NF (I	LA) 125	50	95	145
5. Cherokee NF (TN)	N/A	1	0	1
6. Conecuh NF (AL)	125	16	36	52
7. Croatan NF (NC)	90	45	28	73
8. Daniel Boone NF (KY)	50	6	18	24
9. DeSoto NF (MS)	250	18	96	114
10. Francis Marion NF (NC)	500	487	31	518 2/
11. Homochitto NF (MS)	125	26	35	61
12. Oakmulgce Division, Tall. NF	(AL) 250	157	144	301
13. Ocala NF (FL)	138	1 4	42	56
14. Oconce NF (GA)	210	1	10	11
15. Osceola NF (FL)	250	50	52	102
16. Ouachita NF (AR)	36	16	9	25
17. Sumter NF (SC)	10	0	10	10
18. Talladega Division, Tall. NF	(AL) 125	5	156	161
19. Tuskcgee NF (AL)	21	1	2	3
20. Uwharrie NF (NC)	N/A	0	2	2
Total:	2.661	981	882	1.863

 $[\]underline{1}/$ Based on District records through the 1989 nesting season. Unknown colonics may exist in some populations, but the number is most likely small and insignificant. The likelihood of unknown colonies being active is very low.

²/ Pre Hurricane Hugo population.

Inactive colonies and associated habitat are included in the scope of this proposal because they are needed to achieve population objectives identified in the RCW Recovery Plan. The inactive colony sites offer the best sites for colonization and are key for population growth. Maintenance of suitable habitat conditions across all colonies ensures that the ability to achieve population objectives are not foregone and makes possible the highest probability of capturing dispersing RCW's.

The interim guidelines, as they apply to silviculture, do not include RCW colonies in Virginia or pitch pine stands. The silvics of these pine species are significantly different from other southern yellow pine species and therefore, the silvicultural guidelines are not applicable. For example, activities such as thinning or prescribed fire that benefit other pine species are likely to damage Virginia or pitch pine stands. Therefore, because the silvics are dramatically different and the fact that there are very few RCW colonies in these stands, any proposed action within 3/4 mile of RCW colonies located within Virginia or pitch pine stands would be handled on a case by case basis and would require a site-specific environmental analysis and a biological evaluation, but would not be subject to these guidelines.

Prior to Hurricane Hugo, the Francis Marion RCW population in South Carolina was exempt from the March 27, 1989. Policy and would not have been included under the interim standards and quidelines. This population exceeded 250 active colonies and had increased about 8.5% since 1981. However, the hurricane had a catastrophic effect on the RCW population and its habitat. The latest population survey indicates approximately 25% of the individual RCW families or clans were lost as a direct result of the hurricane. Even with this loss, more than 250 colonies remain. However, concern now is for the viability of remaining clans due to loss of habitat. Vast amounts of foraging area were blown over and numerous cavity trees, weakened by woodpecker cavities, were broken off or blown over. Efforts such as the use of artificial cavity inserts and drilled cavities in undamaged standing trees have been successful. However, it is unknown if the amount of suitable habitat remaining would be sufficient to support the colonies that survived the storm. It is likely that additional RCW colonies would be lost. In addition, the potential exists for more RCW and habitat loss due to indirect effects of the hurricane. An increase in pine bark beetle activity is anticipated which could kill additional trees. Also, the amount of tree debris or fuels (pine tree tops, branches, etc.) now lying on the ground increases the likelihood and severity of wildfires. If lack of moisture and certain atmospheric conditions occur, a catastrophic wildfire is possible that could cause additional woodpecker and tree mortality. Therefore, because it is likely additional colonies would be lost, any action within 3/4 mile of RCW colonies on the Francis Marion National Forest would now be considered under these interim standards and guidelines.

Location - RCW populations considered in this analysis include those with less than 250 active colonies. The National Forests in the States of Florida, Mississippi, Alabama and Louisiana have the largest concentration of these colonies. Other states include Georgia, North Carolina, Kentucky, South Carolina, Tennessee, Arkansas, and Oklahoma. These populations with less than 250 active colonies and the Francis Marion (see Table 1, pg. 3) have a total of 2,661 colonies of which 981 are active. The 3/4 mile zones associated with these colonies comprise approximately 1,330,500 acres of potentially suitable habitat representing 54 percent of the 2,470,000 acres of suitable habitat available to these populations. There are 159,660 acres within the 1/4 mile zone and 1,170,840 acres between 1/4 and 3/4 mile. These acreages are based on an average of 500 acres of potentially suitable habitat within the 3/4 mile zone. These acreages are based on an average of 500 acres of potentially suitable habitat within each 3/4 mile zone.

The RCW is endemic to the pine forests of the southern United States. It is found from Texas to the Carolinas. The species is non-migratory and clans maintain year-round territories near their nesting and roost trees. One of the more unique features of the RCW's life history is its selection of mature, living pines for cavity excavation. Over much of the bird's remaining habitat, it is associated with older aged timber stands. It is the only woodpecker species to excavate a nesting

cavity in living pine trees exclusively. Most active colonies are found in open, park-like pine stands. RCW exhibit a distinct preference for living pines for foraging as well. They are known to select larger pines over smaller pines as foraging sites. Table 1 (pg. 3) list the current inventory of active and inactive colonies by RCW population.

Issues and Concerns

Public Issues

On July 7, 1989, a scoping letter and proposed interim guidelines were sent to each Forest Supervisor where the policy would be in effect. This information was distributed to individuals and organizations on their land and resource management plan mailing list. A total of 14,518 letters were mailed. The letter invited the public to submit their issues and concerns regarding the proposed action of implementing interim guidelines on cutting within 3/4 mile of RCW colonies. In the 45 day time period that was allowed for public response, 124 letters were received. Content analysis done by an interdisciplinary team identified six major issues to be addressed in the analysis of the interim guidelines. They are:

Major Issue I - Include all RCW populations on National Forests under the interim policy.

- a. New studies indicate 250 clans may be insufficient to maintain a viable population.
- b. Birds from larger populations would be needed to support declining populations.

Major Issue 2 - Consider the adverse socio-economic effects of reducing timber cut on the National Forests.

Subissues:

- a. Economic impact to timber industry.
- b. Regional and local socio-economic impacts to timber industry related employment.
- c. Reduction of "in lieu of taxes" payment to county governments.
- d. 3/4 mile zone around colonies is excessive and wastes taxpayers money.

Major Issue 3 - Prohibit all cutting and protect existing habitat until EIS is completed.

Major Issue 4 - Modify existing timber management within 3/4 mile of RCW colonies.

Subissues:

- a. Change from clearcutting and even-aged management to selection cutting and uneven-aged management.
- b. Change basal area (BA) guidelines to lower thinning BA's and raise shelterwood regeneration BA's.
- c. Extend rotation ages.
- d. Re-establish more longleaf and associated species ecosystems and protect existing ones.

- e. Remove mid-story gradually or not at all.
- f. No Southern Pine Beetle (SPB) control.
- g. Do not follow existing handbook direction for any aspect of interim guidelines.
- h. Regeneration areas should be reduced in size.
- i. Do not manage circles, manage acreage blocks so boundaries can be identified on the ground.
- j. Manage according to site conditions, population goals, and whether colony is active or inactive.
- k. Specify foraging needs in trees per acre and diameter class rather than basal area.

Major Issue 5 - Increase RCW survey and monitoring activities.

Subissues:

- a. Know what we have before setting policy as there is significant habitat unsurveyed.
- b. Locate unprotected colonies.
- c. Locate and protect potential colony sites needed to achieve population objectives.
- d. Evaluate various cutting methods on RCW.

Major Issue 6 - Consider the impacts to non-timber and non-RCW resources.

Subissues:

- a. Other uses such as recreation or powerline right-of-ways should be considered in developing interim guidelines.
- b. Consider impact to other resources such as wildlife if hardwood trees are removed for RCW management.

Management Concerns

In addition to public issues and management concerns, the following 5 criteria were used in developing the alternatives considered in detail. They are:

- 1. The alternative would not likely adversely affect RCW or violate the Endangered Species Act.
- 2. The alternative would not affect the overall character of the area surrounding RCW colonies to the extent that other management cannot be considered during the amendment process for the Regional Guide.

- 3. The alternative would consider the zone within 1/4 mile of the colony center to be most sensitive to potential impacts such as habitat fragmentation, colony isolation, and foraging habitat depletion.
- 4. The alternative would consider the zone within 3/4 mile of the colony center important for future colonization and population recruitment.
- 5. The alternative would be consistent with the direction in the RCW Chapter of the Wildlife Habitat Management Handbook (FSH 2309.23R), while providing additional protection and management guidelines as identified through the NEPA process.

II. ALTERNATIVES:

The preceding issues were used in considering and developing 7 alternatives. Two alternatives were considered but eliminated from detailed analysis. Five alternatives were analyzed in detail.

Alternatives Considered But Eliminated From Further Analysis:

1. No cutting within 3/4 mile of RCW colonies during the interim period. This alternative responds to Issue 3.

Reason for elimination: Implementing this alternative would likely result in a Section 7 ESA violation by not taking action to protect and manage RCW habitat thus allowing the continued decline of the smaller RCW populations. Management of RCW habitat, including cutting, is critical in enhancing existing habitat through the removal of mid-story encroachment in the colony site. It is also necessary to provide future suitable habitat and protect the existing habitat from insects and disease.

2. Implement an uneven-aged management silvicultural system within 3/4 mile of RCW colonies. This alternative responds to Issue 4.

Reason for elimination: This alternative was eliminated because uneven-aged management is not feasible to implement within the timeframe of these guidelines. Major changes in the way stands are inventoried, regenerated, monitored, and treated would be required to ensure that overall forest productivity and viability remains high. The time it would take to develop and implement these changes would likely be longer than the interim standards and guidelines would be in effect. It is expected that such a small area of land is likely to be affected during the interim period, irrespective of which alternative is selected, that the possibility to choose other management options in the EIS would be maintained. Thus, an uneven-aged alternative can be analyzed in the EIS for the amendment to the Regional Guide for RCW.

Alternatives Considered in Detail

Cutting or other actions within 3/4 mile of RCW colonies would require project level compliance with NEPA, NFMA, and ESA, as well as other applicable laws and regulations.

Specific activities associated with cutting, colony site protection and management for each alternative are displayed in Table 2 (pg. 18). Table 3 (pg. 31) displays how each alternative responds to the issues.

The alternatives are:

ALTERNATIVE 1- No action. Activities under this alternative associated with colony site protection and habitat management within 3/4 mile of RCW colonies are consistent with the direction found in Chapter 420 of the Forest Service Wildlife Habitat Management Handbook, FSH 2609.23R.

The following activities associated with RCW and other resource management could occur within 3/4 mile of active and inactive RCW colony sites:

- a. Thinning Thinning within suitable habitat is allowed for timber management, southern pine beetle (SPB) risk reduction and RCW habitat improvement. To accomplish these objectives, the number and spacing of trees to be left varies by site-specific conditions. Thinnings within suitable habitat may occur within 3/4 mile of a colony provided a minimum of 6350 trees equal to or greater than 10° in diameter at breast height (DBH) remain within 1/2 mile of the colony site. In order to reduce the risk of SPB infestations, stands should be thinned to maintain or increase tree vigor and reduce SPB risk. Generally, a thinning range of 60-100 square feet of basal area per acre is desired. The trees left to grow should be well formed, healthy and vigorous.
- b. Stand Regeneration Using the Ciearcutting Method The clearcut method of regenerating stands of suitable habitat may be used provided the site-specific analysis determines adequate foraging is maintained and not isolated from the colony as a result of the clearcut.
- c. Stand Regeneration Using the Shelterwood/Seed-tree Methods Regeneration of suitable habitat using the shelterwood or seed-tree method may occur within 3/4 mile of the colony if the site-specific analysis determines that adequate foraging habitat would be maintained and not isolated from the colony as a result of the seed-tree or shelterwood cut. The amount of shelterwood or Seed-trees retained on the site would depend on site conditions and species. Guidance is provided by FSH 2409.21d and 2471.1-R-8, Silvicultural Handbooks.
- **d.** Clearing for Non-timber Management Purposes Cutting in suitable habitat for purposes such as oil and gas exploration, powerline or gas line rights-of-way establishment or maintenance may occur provided the site-specific analyses indicates RCW is not likely to be adversely affected.
- e. Colony Site, Replacement/Recruitment Stand Protection
 - 1. **Cutting** Cutting may occur within the colony site including cutting of cavity trees if necessary to protect or enhance RCW habitat or to remove a hazard to public safety. Consultation with F&WS is necessary prior to cutting a cavity tree.
 - 2. Motorized or Heavy Equipment Use Use of this type equipment in the colony site is prohibited during the breeding season (generally March 1 July 31) in RCW populations with less than 50 active colonies. In populations with 50 or more active colonies, use of this equipment will be minimized during the breeding season. Concentrated equipment or human use such as log decks or off-road vehicle trails within the colony site are not prohibited but project planning should locate such activities outside the colony if possible.
 - 3. **Prescribed Burning** Burning to control mid-story encroachment could occur and is recommended in the 3/4 mile zone including the colony site. Cavity trees will be protected from fire by hand raking flammable debris from base of cavity tree a minimum of 10 feet.

- **4.** Construction of linear rights-of-way such as roads and utility lines These activities may occur within the colony site except during the RCW breeding season and with adequate cavity tree protection.
- 5. Existing roads through colony site Roads may be used if not adversely impacting RCW.
- **6. SPB suppression** Efforts to protect existing habitat from SPB would continue under the direction in the SPB EIS Record of Decision.
- 7. Any other potentially disturbing activities not specifically identified or known at this time that may affect RCW during the breeding season (generally March 1 July 31) In populations with less than 50 active colonies, any potentially disturbing activities such as trail rides, enduro races, etc., would be prohibited in the colony site during the breeding season. In populations with 50 or more active colonies, potentially disturbing activities will be minimized.
- f. Colony Site, Replacement/Recruitment Stand Management
 - 1. *Mid-story Control* Hardwood mid-story should be reduced to less than 20 square feet of hardwood basal area per acre. All hardwood stems 1 inch in diameter or larger within 50 feet of cavity trees should be removed.
 - 2. Colony Site Designation Designate a 200 foot boundary around the aggregate of cavity trees and manage as a colony site.
 - 3. Marking Mark all cavity trees and map colony sites.
 - 4. Thinning Within Colony Site Thin colony site as needed to reduce SPB risk.
 - **5.** Recruitment Repiacement Stands Establish recruitment and replacement stands for classification as unsuitable acres (unsuitable for timber management). These stands would not have a rotation age and would be managed as colony sites.
- g. Foraging Habitat Management At least 125 acres of well stocked (60-90 sq. ft. per ac. BA) pine or pine-hardwood stands which are 30 years or older (40% or 50 acres > 60 years old) contiguous to the colony site would be managed as foraging habitat for each colony. As an option, a Forest may provide an equivalent foraging amount of 6350 trees > 10 inches DBH.
- h. *Monitoring* approximately 8.5% of the colonies would be checked annually to determine the colony status as part of the prescription process. A 10 year trend survey has been developed utilizing sample (baseline) compartments in each RCW population.
- I. Special Area Management Habitat manipulation and special protection measures may be implemented in special areas such as wilderness in order to protect or recover RCW. The focus would be to maintain viability of essential RCW colonies in these areas. Only the minimum actions necessary would be used following appropriate NEPA compliance and a biological evaluation. Recruitment and replacement stands for these special areas would be established outside special areas to encourage RCW population growth outside the special area.

Alternatives 2-5

Alternatives 2-5 identify two zones for protecting RCW colony sites. These are within 1/4 mile of a colony center and between 1/4 and 3/4 mile of the center. Suitable foraging habitat within 1/4 mile of each colony is critical in sustaining that colony. Suitable nesting habitat within 3/4 mile of each colony is recommended by the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R) and the U.S. Fish and Wildlife Service's RCW Recovery Plan to enhance colonization and provide for recruitment. Because RCW management objectives are different in each zone, they are identified separately and specific habitat management direction and mitigation measures are provided.

Within 1/4 mile of the colony center, RCW can be adversely affected if cutting causes habitat fragmentation, isolates the colony or depletes the minimum amount of foraging habitat necessary to sustain the colony. Alternatives 2-5 provide guidelines to allow cutting, protect the colony site and manage the habitat within this zone to minimize these impacts.

In the area between 1/4 and 3/4 mile of the colony center, the management objectives are to provide suitable old growth pine for future colonization, population recruitment and reduce the chance of colony isolations. Therefore, alternatives 2-5 provide guidelines to allow cutting, protect the colony site and manage the habitat in this area while providing for a component of the oldest age pine trees.

Alternatives 2-5 are consistent with the direction in the Forest Service Handbook (2609.23R) and offer additional management measures for the smaller RCW populations in order to prevent any further population decline during the interim period. Mitigation measures to reduce the potential impacts of these activities in these zones have been incorporated in all the alternatives instead of being listed separately.

Alternative 2, 3 and 5 contain additional colony site protection and management measures as well as more foraging habitat management, monitoring and special area management over what is found in FSH 2609.23R. These measures were developed from public issues, management concerns, the Comprehensive Plan based on October 22, 1988, court decision for the Management of the Redcockaded Woodpecker Habitat in the National Forests in Texas (December 15, 1988), and F&WS recommendations for that plan.

ALTERNATIVE 2 - Activities under this alternative associated with cutting, colony site protection and habitat management within 3/4 mile of RCW colonies would follow the "Proposed Action - Interim Policy on Cutting Within 3/4 Mile of RCW Colonies", that was distributed with the July 7, 1989, scoping letter for this EA.

The following direction associated with RCW and other resource management applies within 1/4 mile of active and inactive colony sites:

a. *Thinning* - Thinning within suitable habitat is emphasized to improve RCW habitat and reduce the risk of SPB infestations. To accomplish these objectives, the number and spacing of trees to be left varies by site-specific conditions. Thinnings within suitable habitat may occur within 3/4 mile of a colony provided a minimum of 6350 trees equal to or greater than 10" in diameter at breast height would remain within 1/2 mile of the colony site to provide adequate foraging. In order to reduce the risk of SPB infestations, stands should be thinned to attain maximum growth and vigor. Generally, a 60 to 100 sq. ft. basal area per acre is recommended depending on site conditions. Thinnings would retain trees most suitable for future RCW nesting habitat. Trees left

in order of priority are: (1) relict trees; (2) potential cavity trees; (3) trees 10 inches and greater DBH that are not potential cavity trees; (4) trees less than 10 inches DBH and; (5) longleaf pine where possible.

- b. Stand Regeneration Using the Clearcut Method Regeneration using the clearcut method would not occur during the interim period unless a determination is made that RCW would be enhanced and not adversely affected as a result of the clearcut. The circumstances under which this could occur is when opportunities arise for converting longleaf pine sites occupied by another pine species, back to longleaf. The only feasible way of accomplishing this is by clearcutting and planting longleaf seedlings. However, in order to ensure adequate foraging, clearcuts would not occur if more than 25 percent of the existing suitable habitat within 1/4 mile of the colony is less than 30 years old. In addition, a site-specific analysis must indicate RCW habitat would be enhanced by converting a site back to longleaf pine. Relict longleaf trees and one acre or larger clumps of longleaf pine containing at least 40 square feet of basal area per acre of longleaf pine would be retained in the clearcut. In addition to the longleaf relicts, 5-6 potential longleaf cavity trees per acre would be retained, if available.
- c. Stand Regeneration Using the Shelterwood or Seed-tree Method Regeneration using these methods would not occur within 1/4 mile of the colony site during the interim period. Existing shelterwood or seed-trees would not be removed during the interim period.
- d. Clearing for Non-timber Management Purposes Clearings 10 acres or less for non-timber management purposes may occur if no more than 25 percent of the suitable habitat within 1/4 mile of the colony site is less than 30 years of age. Clearings over 10 acres cannot occur within this zone unless a biological evaluation determines that the action would not likely adversely affect RCW. The F&WS concurs with this determination.

The following direction associated with RCW and other resource management applies between 1/4 and 3/4 mile of active and inactive colony site centers under this alternative:

- a. Thinning The same guidelines described for use within 1/4 mile of the colony site apply.
- **b.** Stand Regeneration Using the Clearcut Method Clearcutting may only be considered when the shelterwood or seed-tree methods are not feasible. These conditions include:
 - 1. Converting sites where other species of pine are occupying longleaf sites back to longleaf.
 - 2. Sparse or damaged stands where natural regeneration is not feasible. These stands are understocked and the trees are often unevenly distributed over the area.
 - 3. Slash pine sites with very wet conditions due to a high water table.

When converting back to longleaf, longleaf relicts and one acre or larger clumps of longleaf pine with at least 40 square feet of basal area per acre would be retained in the clearcut. When clearcutting sparse, damaged, or wet sites, relict trees and one acre or larger clumps of pine with at least 40 square feet basal area per acre would be retained. In addition, 5-6 potential cavity trees per acre would be retained if available.

c. Stand Regeneration Using the Shelterwood or Seed-tree Method - These methods can be used for regenerating stands at or above RCW rotation age (See RCW Extended Rotation Guide, pg 12) provide adequate nesting or potential nesting habitat remains for replacement or recruitment following the proposed action. Regeneration may occur if more than 50% of the suitable

habitat within 3/4 mile of a colony is 60 years or older and at least 50% would remain following the proposed action. The cutting should occur in the predominate age class not necessarily the oldest. In addition, RCW Handbook direction (FSH 2609.23R) would be followed and fragmentation, colony isolation, foraging habitat amounts and continuity, isolation of recruitment or replacement (R/R) stands and age class distribution considered. Leave trees in existing shelterwood or seed-trees would not be removed during the interim period.

The following shelterwood or seed-tree leave basal area ranges should be left as a minimum:

Loblolly pine: 20-30 square feet/acre
 Shortleaf pine: 20-30 square feet/acre
 Longleaf pine: 25-40 square feet/acre
 Slash pine: 25-40 square feet/acre

Trees to be retained would be selected in the following order:

- 1. relict trees
- 2. potential cavity trees
- 3. other trees 10 inches or greater DBH that would meet the requirements for seed trees.

RCW extended rotation guide:

Forest Type	With R/R Stands	Without R/R Stands
yellow pine	70 years or longer	80 years or longer
longleaf pine	80 years or longer	100 years or longer

d. Clearing for Non-Timber Management Purposes - Clearing less than 10 acres are allowed following the existing direction to ensure 125 acres of foraging are provided and not isolated from the colony as well as protecting the colony site. Clearings greater than 10 acres would occur in stands below RCW stand rotation age if the clearing and associated activities adhere to the RCW handbook direction (FSH 2609.23R) and consider the effects of fragmentation, colony isolation, foraging habitat continuity, foraging habitat amount, isolation of recruitment and replacement stands and age class distribution. Clearings over 10 acres in stands above RCW stand rotation age would not occur during the interim period.

e. Colony Site, Replacement/Recruitment Stand Protection

- 1. Cutting Cutting in colony site or in replacement or recruitment (R/R) stands, which are managed as colony sites, would only be done to protect or improve RCW habitat or to remove a public hazard. If cavity tree cutting is considered, F&WS would be consulted.
- 2. Motorized or Heavy Equipment Use If motorized or heavy equipment is needed for colony site improvement or protection, contract administration and/or special contract provisions would be sufficient to protect the colony site, especially the cavity and relict trees. Areas of concentrated equipment or human use such as log decks or ORV trails would not be located within the colony site.
- 3. Prescribed Burning When prescribed burning is planned within the colony site, adequate protection measures for cavity trees, such as hand raking debris a minimum of 10 feet away from the trees would occur. Plow lines would be excluded from the colony site.

- 4. Construction of Linear Rights-of-way such as Roads and Utility Lines Roads, power lines or other linear rights-of-way would not be constructed within a colony site.
- 5. Existing Roads Through Colony Site Level D and other improved Forest Service roads through colony sites that are likely to have an adverse affect on the RCW would be closed. All other roads would remain open.
- **6. SPB Suppression** When SPB infestations are detected within the 3/4 mile zone and control is necessary, the SPB Record of Decision and EIS would be followed with appropriate NEPA compliance on site-specific projects.
- 7. Nesting Season Disturbance Any resource management activities that could disturb RCW during this nesting season (generally March 1 July 31) would not occur. This includes habitat improvement activities unless the continued viability of the clan requires nesting season treatments.

f. Colony Site, Replacement/Recruitment Stand Management

- 1. *Mid-story removal and control* These activities could occur within colony sites and replacement/recruitment (R/R) stands on a biological priority basis. Mid-story hardwoods would be removed on an entire stand basis unless a site-specific evaluation identifies that their removal would decrease the suitability of the colony or R/R stands for RCW. A minimum of 10 acres should be treated. Hardwood control in natural hardwood areas, i.e., riparian area or hardwood stringers should be limited to the area within 50 feet of cavity trees. Pine mid-story should only be controlled to remove physical barriers to the cavity tree, potential cavity trees, and line of site between them.
- 2. **Thinning** overstory pine would be thinned within colony sites and R/R stands if needed to reduce SPB risks. A 20-25 foot tree spacing is desired.
- 3. Replacement stands these stands would be selected for all active and inactive colonies and should be as close as possible and not more than 1/2 mile from the colony site.
- **4.** Recruitment stands these stands would be selected on a compartment basis for those compartments in which the population goal is greater than the number of existing colonies. The number of recruitment stands would equal the compartment goal minus the number of colonies in that compartment. The recruitment stand should be between 1/4 and 3/4 of a mile from the colony site.
- **5.** *Monumentation* colony site monumentation must be updated before any planned habitat alteration project would occur within 1/4 mile of a colony site.
- **6.** Restrictors cavity restrictors would be used when needed to protect cavities threatened by enlargement or when needed to rehabilitate enlarged cavities when cavities appear limiting. After installation, use of restrictors would require additional monitoring to ensue acceptance by the RCW.
- 7. Augmentation augmentation of single male clans with subadult females would be done to maintain viability of single male colonies and maintenance for long term genetic diversity.
- **8.** Artificial cavities artificial cavities would be used to supplement existing cavities when cavities are limited, especially in support of augmentation efforts.

- g. Foraging Habitat Management Pine and pine-hardwood forest stands 30 years of age and older within 1/2 mile of and contiguous with a colony are considered foraging habitat for the RCW. At least 6,350 pine stems equal to or greater than 10 inches DBH and a total of 8,490 square feet of pine basal area are required as foraging substrate within this area to support a colony. The number of acres required to produce this number of trees will vary depending on site and stand conditions. Normally 125 acres of well stocked (70-90 sq. ft. BA/acre) pine or pine-hardwood stands with 50% or more of the BA in pine 30 years of age or older, with 40% of this being 60 years or older, having a minimum of 24 pines 10 inches DBH or larger will provide ample foraging substrate. The actual foraging substrate equivalents, as described above, should be calculated when foraging habitat appears to be limited.
- h. Monitoring Each colony would be checked annually to determine the colony status and presence of birds. This would include: (a) 100% transect of suitable habitat in the compartment prescribed; (b) a repeat of sample compartments in populations greater than 100 active colonies; and (c) survey of suitable habitat not previously surveyed. A 10 year population trend survey developed utilizing sample (baseline) compartments in each RCW population would continue.
- I. Special Area Management Habitat manipulation and special protection measures may be implemented in special areas such as Wilderness in order to protect or recover RCW. The focus would be to maintain viability of essential RCW colonies in these areas. Only the minimum actions necessary would be used following appropriate NEPA compliance and a biological evaluation. Recruitment and replacement stands for these special areas would be established outside special areas to encourage RCW population growth outside the special areas.

ALTERNATIVE 3 - Activities under this alternative associated with cutting, colony site protection, and habitat management within 3/4 mile of RCW colonies are based on the "Proposed Action - Interim Policy on Cutting Within 3/4 Mile of RCW Colonies", that was distributed with the July 7, 1989, scoping letter for the EA (alternative 2) as modified by public issues, management concerns, and F&WS recommendations. Public issues and management concerns were identified through the NEPA scoping process. F&WS recommendations were provided through the consultation process on the Texas comprehensive RCW management plan and on the Policy on Cutting Within 3/4 Mile of RCW Colonies on Existing Timber Sale Contracts dated March 27, 1989. All or part of these recommendations, as they are applicable to interim guidelines are included.

The following direction associated with RCW and other resource management applies within 1/4 mile of active and inactive colony site boundaries:

- a. *Thinning* The guidelines described when thinning within 1/4 mile of a colony site are the same as Alternative 2, only the BA range was increased to allow for forests with higher site indices.
- b. Stand Regeneration Using the Clearcut Method Regeneration using the clearcut method would not occur during the interim period unless a determination is made that RCW would be enhanced and not adversely affected as a result of a clearcut. Clearcutting is necessary when converting other species of pine occupying longleaf sites back to longleaf pine. Longleaf seedlings could then be planted to re-establish a longleaf pine stand. However, before any cutting occurs, a site-specific analysis would be conducted to ensure: (a) sufficient foraging would remain following the proposed action; (b) the proposed action would not cause habitat fragmentation; (c) R/R stands would not be isolated from the colony and; (d) the distribution of age classes in suitable habitat is maintained or enhanced by the proposed action.

Specific guidelines to achieve a desirable age class distribution to meet future RCW habitat needs would be evaluated before a clearcut is made. These include: (a) clearcuts would average less than 25 acres in size; (b) cutting would be done in the dominant age class and not necessarily the oldest; (c) cutting would only be considered if no more than 25% of the suitable habitat within 1/4 mile of the colony is less than 30 years of age and; (d) cutting may only be considered if no more than 8.5% of the suitable habitat within 1/4 mile of the colony is 10 years

old or less including non-stand size temporary openings due to insects, disease or other resource management activities.

There would be 5-6 relict longleaf trees and/or potential cavity tree per acre as well as one acre or larger clumps of longleaf pine containing at least 40 square feet basal area per acre longleaf retained in a clearcut.

- c. Stand Regeneration Using the Shelterwood or Seed-tree Method Regeneration using these methods would not occur within 1/4 mile of the colony site during the interim period. Existing shelterwood or seed-trees would not be removed during the interim period.
- d. Clearing for Non-timber Management Purposes Clearing 10 acres or less for non-timber management purposes would not occur if one or both of the following conditions exist.
 - 1. More than 25 percent of the suitable habitat within 1/4 mile of the colony site is less than 30 years of age.
 - 2. 8.5% of the suitable habitat within 1/4 mile of the colony site is 10 years old or less including all non-stand size temporary openings due to insects, disease or other resource management activities.

Clearings greater than 10 acres would not be considered.

The following direction associated with RCW and other resource management applies between 1/4 and 3/4 mile of active and inactive colony site boundaries under this alternative:

- **a.** *Thinning* The same guidelines described for use within 1/4 mile of the colony site apply to the area between 1/4 and 3/4 mile from the colony.
- b. Stand Regeneration Using the Clearcut Method Clearcutting and artificial regeneration would occur when natural regeneration is not feasible. These conditions include: (1) converting sites where other species of pine are occupying longleaf sites back to longleaf; (2) slash pine sites with very wet conditions due to a high water table; (3) damaged and sparse stands with 24 or less stems per acre > 10 inches DBH. However, before any cutting occurs, the site-specific analysis would ensure: (a) sufficient and accessible foraging for the colony would remain following the proposed action; (b) the proposed action would not cause habitat fragmentation; (c) R/R stands would not be isolated from the colony.

Specific guidelines to achieve a desirable age class distribution to meet future RCW habitat needs would be evaluated before a clearcut could occur. These include: (a) clearcuts would average less than 25 acres in size; (b) cutting would be done in the dominant age class and not necessarily the oldest; (c) cutting can only be considered if no more than 25% of the suitable habitat within 3/4 mile of the colony is less than 30 years of age and; (d) cutting would only be considered if no more than 8.5% of the suitable habitat within 3/4 mile of the colony is 10 years old or less including non-stand size temporary openings due to insects, disease or other resource management activities.

When regenerating a stand using the clearcut method to convert other species of pine growing on longleaf sites back to longleaf pine, 5-6 relict longleaf trees and/or potential cavity trees as well as one acre or larger clumps of longleaf pine containing 40 or more square feet of basal area per acre would not be cut. When regenerating sparse, damaged or wet slash pine sites, relict pine

trees and clumps of pine containing 40 or more square feet of basal area per acre would not be cut. Clearcuts would average less than 25 acres in size.

c. Stand Regeneration Using the Shelterwood or Seed-tree Method - In order to meet the long-range RCW habitat needs, stand regeneration would be necessary to even out the age class distribution within suitable RCW habitat. These new stands would be needed for RCW foraging and nesting habitat in the future. This process would begin during the interIm period provided the action does not adversely affect the existing RCW populations. By using the shelterwood or seed-tree method of regeneration, new stands would be established while maintaining a component of potential foraging and nesting habitat. To ensure the regeneration of suitable habitat does not adversely affect RCW populations during the interim, a site-specific analysis would be done for each proposed regeneration. The site-specific analysis would evaluate: (a) foraging area amounts and continuity; (b) habitat fragmentation; (c) isolation of R/R stands and; (d) age class distribution of suitable habitat.

Specific guidelines for considering regeneration between 1/4 and 3/4 mile of a RCW colony are provided to ensure desired age class distribution within this area and maintenance or enhancement of existing suitable habitat. They are:

- -- no regeneration in the oldest 1/3 of the suitable habitat within 3/4 mile of the colony site.
- -- if possible, regeneration in the predominant age class and not necessarily the oldest.
- -- no regeneration if more than 25% of the suitable habitat within 3/4 mile of the colony is less than 30 years old.
- -- no regeneration if more than 8.5% of the suitable habitat within 3/4 mile of the colony site is 10 years old or less including non-stand size openings due to insects, disease or other resource management activities.

If the above criteria is met and a shelterwood or seed-tree regeneration cut is considered, the minimum leave basal area to be left for loblolly and shortleaf pine is 30 sq. ft./acre and 40 sq. ft./acre for longleaf and slash pine.

Relict trees, potential cavity trees, and trees 10 inches dbh or larger meeting seed-tree requirements should be selected in that order for retention in the regeneration areas. Existing shelterwood or seed-trees would not be removed during the interim period.

d. Clearing for Non-timber Management Purposes - Clearings less than 10 acres would occur but not in the oldest 1/3 of the existing suitable habitat.

If a clearing greater than 10 acres is considered within suitable habitat that is at or above RCW rotation age (see RCW extended rotation guide, pg. 12) it would occur if it doesn't affect the oldest 1/3 of the existing suitable habitat. If a greater than 10 acre clearing is considered in suitable habitat below RCW rotation age, guidelines in FSH 2609.23R would be followed and consideration would be given to the potential adverse effects of habitat fragmentation, colony isolation, foraging habitat amounts and continuity, R/R stand isolation and age class distribution imbalances.

RCW colony site protection and management guidelines as well as foraging habitat management, monitoring and special area management, are the same as alternative 2. (See page 12).

One exception is the selection and management of corridors (see glossary for definition) to maintain habitat continuity between colonies, even though these areas are outside the specified 3/4 mile zone.

ALTERNATIVE 4 - Activities under this alternative associated with cutting, colony site protection, and habitat management within 3/4 mile of RCW colonies are consistent with the guidelines for proposed sales in the "Policy For Cutting Within 3/4 Mile of RCW Colonies on Existing Timber Sale Contracts", dated March 27, 1989.

The following activities associated with RCW and other resource management would occur within 3/4 mile of active and inactive colony site boundaries under this alternative:

- **a.** *Thinning* The guidelines described when thinning within 1/4 mile of a colony site under alternative 2 apply. In addition, at least 60 square feet basal area per acre would be retained, longleaf if available.
- b. Stand Regeneration Using the Clearcut Method Clearcutting and artificial regeneration would occur when natural regeneration is not practical. These conditions including converting sites where other species of pine are occupying longleaf sites back to longleaf pine and in sparse or damaged stands. Clearcutting and planting of longleaf seedlings is necessary to re-establish a longleaf pine stand. Clearcutting and planting would also be necessary to regenerate slash pine stands on very wet sites. Damaged and sparse stands with 24 or more stems > 10 inches DBH would not be regenerated unless a site specific analysis indicates the stand(s) is not critical for RCW habitat. Damaged and sparse stands with less than 24 stems > 10 inches DBH would be regenerated. Regeneration under these conditions can be considered if:
 - 1. stand is below RCW rotation age. (see RCW Extended Rotation Guide under Alternative 2)
 - 2. site-specific analysis indicates action is not likely to have an adverse affect on RCW habitat.
 - 3. Regional Forester approves.
 - 4. regeneration area is designed to consider the potential adverse effects of fragmentation, colony isolation, foraging habitat amount and continuity, isolation of recruitment or replacement stands and age class distribution.
- c. Stand Regeneration UsIng the Shelterwood or Seed-tree Method Would not be considered during the interim period. Leave trees in existing shelterwood or seed-trees would not be removed during the interim period.
- d. Clearing for Non-timber Management Purposes Clearings for non-timber management purposes may occur during the interim period provided the site-specific analysis indicates that action would not be likely to have an adverse affect on RCW.

RCW colony site protection and management guidelines as well as foraging habitat management, monitoring and special area management, are the same as alternative 1. (See page 8)

ALTERNATIVE 5 - This alternative would only allow thinning within 3/4 mile of active or inactive RCW colonies. Guidelines for thinning under alternative 4 would be followed.

RCW colony site protection and management guidelines as well as foraging habitat management, monitoring and special area management, are the same as alternative 2. (See page 12)

TABLE 2 - ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MANAGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION

TABLE 2 - ACTIVI	TIES ASSOCIAT	ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MAN	at management within 3/4 mile	AGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION	W SITE PROTECTION	page l
Specific Activities	rities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
I. Cutting activities	/ities:					
A. Within 1/4 mile of geometric center of colony site, excludin actual colony.	in 1/4 mile of ic center of site, excluding colony.					
1. Thinning	80	1. Allowed for forest management, SPB risk reduction, and RCW habitat improvement.	1. Same as Alternative 1 but emphasizes the retention of relict trees and potential cavity trees for nesting habitat.	1. Same as Alternative 2	1. Same as Alternative 2.	1. Same as Alternative 2.
RCW/EA-18	range for	a. Will vary by site conditions. Generally, a basal area range of 60-100 sq. ft/ac will maintain or increase tree vigor reducing SPB susceptibility. A minimum of 6.350 tree \frac{2}{10''} DBH within 1/2 mile and contiguous to the colony is required.	a. 60-100 sq. ft. BA depending upon:age of standsite indextotal stand densityforaging habitat availability. A minimum of 6350 trees > 10" DBH within 1/2 mile and contiguous to the colony is required.	a. Same as Alternative 2, except basal area range increased from 60-110 sq. ft./ac. to allow more management flexibility for various site indexes.	a. Retain a minimum of 60 sq. ft. BA of pine.	a. Same as Alternative 3.
b. Tree r priority.	b. Tree retention priority.	b. Not specifically addressed. Silvicultural guidelines apply. Relict trees and potential cavity trees not protected.	b. (1) Relict trees. (2) Potential cavity trees. (3) Trees > 10" DBH that are not potential cavity trees. (4) Trees < 10" DBH.	b. Same as Alternative 2.	b. Same as Alternative 2.	b. Same as Alternative 2.
2. Clearcutting	ting.	2. Allowed if adequate foraging habitat is maintained and colony site is not isolated from foraging habitat.	2. Allowed to convert off-site pine on longleaf sites to longleaf if pine or pine-hardwood type 30 years and younger consist	2. Allowed to convert off-site pine to long leaf if the following criteria are met: a. sufficient forag-	2. Allowed to regenerate understocked and damaged stands not identified as foraging habitat or to convert	2. Not allowed.

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Specific Activities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4	Alternative 5 June 16 Proposal Thinning Only
Within 1/4 Mile (cont'd)					
		of less than 25% of the suitable habitat after	ing habitat. b. no fragmentation.	off-site pine back to longleaf pine if:	
		harvest within 1/4 mile	c. R/R stands not	a. Stand is below	
		of colony site and if	isolated.	RCW rotation age.	_
		The following the RCW.	d. maintain or en-	b. Analysis indica-	
		Ine rollowing would be	dictaintica	tes RCW habitat not	
		recalled it available in regeneration areas:	distribution, by:	adversely affected.	
		1. all longleaf relict	dominant age class.	Forester concurs	-
		trees and 5-6 potential	2. having no more	d. Design of regen-	
	_	cavity trees per acre.	than 25% < 30 yr.	eration area	
		2. l acre or larger	age class.	considers effects	
		inclusions of longleaf	3. having no more	of:1. fragmentation.	_
		with > 40 sq. ft./ac.	than 8.5 in 0-10 yr.	2. colony.	_
		BA.	age class including	isolation.	
			non-stand size tempo-	3. foraging.	
			rary openings due to	habitat	
			insects, disease or	continuity.	
			other resource man-	4. foraging	
			agement activities.	habitat amounts.	
			The following would be	5. isolation of	
			retained if available	recruitment or	
			in regeneration areas:	replacement	
			1. 5-6 relict trees	stands.	
			and/or potential	6. age class	
			cavity trees per ac.	distribution.	
			2. 1 acre or larger	e. Sierra Club Legal	
	-		inclusions of long-	Defense Fund and R-8	
			leaf with > 40 sq.ft/	Timber Purchaser	
			acre BA.	Council are	
				notified.	
				The following would be	
				retained if available	_
				in regeneration areas	_
				1.5-6 relict trees	
		-		or potential cavity	
				trees per ac.	
				2. 1 ac. or larger	
				inclusions of long-	
				leaf with > 40 sq.ft/	
	_	_		acre bA.	_

TABLE 2 - ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MANAGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION

Specific Activities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
Within 1/4 mile (cont'd)					
3. Shelterwood/seedtree.	3. Allowed under same criteria for clearcutting (I.A.2.).	3. Not silviculturally appropriate for stand conditions where regeneration is allowed.	3. Same as Alternative 2.	3. Same as Alternatiave 2.	3. Not allowed.
a. Leave basal area (BA)	a. Depends on species and site conditions. Guidance for determining provided by FS Silvicultural Handbooks(FSH 2409.21d and 2471.1-R-8.	a. N/A	a. N/A	a. N/A	a. N/A
b. Tree retention priority.	b. Not specifically addressed, would be determined at the project level based on desirable seed tree characteristics.	b. N/A	b. N/A	b. м/A	b. N/A
O ₄ . Cutting for other than timber management.	4. Not specifically addressed.				
a. Clearing < 10 acres.	a. Not specifically addressed. Site specific analysis at the project level would determine if clearing is likely to adversely affect RCW.	a. Allowed if criteria under clearcutting within 1/4 mile of colony center (1.A.2.) met.	a. Activity requiring the clearing should be relocated outside 1/4 mile zone if possible. If consideration is necessary, criteria under clearcutting within 1/4 mile will be followed.	a. Same as Alternative 1.	a. Not allowed.
b. Clearing > 10 acres.	b. Same as a. above.	b. Not allowed.	b. Not allowed.	b. Same as ALternative 1.	b. Not allowed.

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Specific Activities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
Between 1/4 & 3/4 mile					
1. Thinning.	1. Same as within 1/4 mile of colony site.	1. Same as within 1/4 mile of colony site.	1. Same as within 1/4 mile of colony site.	1. Same as within 1/4 mile of colony site.	1. Same as within 1/4 mile of colony site.
a. BA range.	a. Same as within 1/4 mile of colony site.	a. Same as within 1/4 mile of colony site.	a. Same as within 1/4 mile of colony site.	a. Same as within 1/4 mile of colony site.	a. Same as within 1/4 mile of colon
<pre>b. Tree retention priority.</pre>	b. Same as within 1/4 mile of colony site.	b. Same as within 1/4 mile of colony site.	b. Same as within 1/4 mile of colony site.	b. Same as within 1/4 mile of colony site.	site. b. Same as within 1/4 mi of colony sit
2. Clearcutting.	2. Allowed if adequate foraging habitat is maintained and colony site is not isolated from foraging habitat.	2. Limited to stands in the following conditions: a. slash pine sites where high water tables would restrict seedling survival and early growth. b. off-site pine occupying longleaf pine sites. c. understocked stands not identified as foraging habitat. d. damaged stands not identified as foraging habitat. (1) relict trees. (2) 5-6 potential cavity trees per ac. (3) 1 acre or larger inclusions of pine (longleaf pine in conversions) with 40 sq. ft./ac. BA or greater.	2. Can be considered where natural regeneration not feasible, such as converting to longleaf pine; damaged or sparse stands with inadequate seed source not identified as foraging habitat; very wet slash pine sites. Site-specific analysis must consider effect of: a. depletion and location of fragmentation of habitat. c. isolating R/R stands. d. A disproportionate age class distribution would maintainr and enhance nesting potential within suitable habitat. The following criteria would apply when considering stands regeneration using the regeneration using the clearcut method:	2. Limited to the same conditions and same conditions and criteria described for clearcutting within 1/4 mile of colony site (1.A.2.).	2. Not allowed.

4	Alternative (No Action)	Alternative 2	Alternative 3 Modified	Alternative 4	Alternative 5 June 16 Proposal
Between 1/4 & 3/4 Mile (cont'd)	ייין אין אין אין אין אין אין אין אין אין	June 10 Frobosa1	June to Proposat	March 21 Policy	Thinning Only
3. Shelterwood/seedtree regeneration.	3. Allowed if adequate foraging habitat is provided.	3. Allowed for stands at or above RCW rotation age if more than 50% of the pine or pine/hdwd. stands within 3/4 mile of colony are 60 yrs. old or older and at least 50% remains following regeneration. Regeneration must occur in the dominate age class & not the oldest. Allowed for stands below RCW rotation age following direction in FSH 2609.23R and considering criteria of: (a) fragmentation. (b) colony isolation. (c) foraging habitat amounts. (d) foraging habitat continuity. (d) foraging habitat mounts. (f) age class distribution. (f) age class distribution.	3. Regeneration can be considered if the following criteria are met: a. the oldest 1/3 of the suitable habitat will not be affected. blanned in the dominant age class and not necessarily the oldest c. not more than 25% of the suitable hab. will be 30 years old or less following regeneration. less including nonstand size temporary openings due to insects, disease or other resource management activities. following regeneration if the above criteria are met, the site-specific analysis would evaluate potentaial effects of stand regeneration on the following: 1. fragmentation. 2. colony isolation. 3. foraging habitat.	3. Not silviculturally appropriate for stand conditions where regeneration is allowed.	3. Not allowed.

Alternative 5 June 16 Proposal Thinning Only	a. Not allowed.	Not allowed.
Alternative 4 March 27 Policy	a. Not addressed specifically. Would be evaluated on a case by case basis.	Not specifically addressed.
Alternative 3 Modified June 16 Proposal	a. Not to occur in oldest 1/3 of the existing suitable habitat within 3/4 mi. of colony.	Clearings in stands above RCW rotation age are allowed if not planned in the oldest 1/3 of the existing suitable habitat. Clearings in stands below RCW rotation age are allowed if FSH 2609.23R direction is followed. The site-specific analysis for all clearings in this zone would consider the potential adverse effects of: 1. habitat fragmen-tation.
Alternative 2 June 16 Proposal	a. Allowed following direction in FSH 2609.23R and if following criteria considered: (1) fragmentation. (2) colony isolation. (3) foraging habitat continuity. (4) foraging habitat amount. (5) isolation of recruitment or replacement stands. (6) age class distribution.	Clearings in stands above RCW rotation age are allowed if greater than 50% of the stands within 3/4 mile of colony center are 60 years old or older and at least 50% of these stands will remain following the clearing. In addition, a biological evaluation must determine the action not likely to adversely affect RCW and F&WS concurs.
Alternative 1 (No Action) Pre 3/27 Direction	a. Not addressed specifically, coordinated at the project level.	Not specifically addressed, coordinated at the project level.
Specific Activities	Between 1/4 & 3/4 Mile (cont'd) 4. Cutting for other than timber management. A. Clearings < 10 acs.	B. Clearings > 10 acs.

TABLE 2 - ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MANAGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION

	TABLE 2 - ACTIVITIES ASSOCIAT	ED WITH CUTTING AND HABITA	- ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MANAGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION	3 OF COLONY SITE AND COLON	Y SITE PROTECTION	page 9
		Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
	Between 1/4 & 3/4 Mile (cont'd)					Girls
	B. Clearings > 10 acs. (cont'd)		age are allowed if FSH 2609.23R direction	2. colony isolation.		
			followed and consider	amounts & continuity.		
			design criteria in 4.a. above for clearing less	4. R/R stand isolat-		
			than 10 acres.	5. age class distri- bution imbalances.		
	II. Colony site protection. A. Cutting within	A. Done only to	A. Same as	A. Same as	A. Same as	A Same
	colony sites.	protect or enhance RCW habitat or because hazardous to publics. Individual tree or group selection only.	₽	Alternative 1.	Alternative 1.	
R	B. Cavity Trees.	B. Will not be cut	B. Same as	B. Same as	B. Same as	B. Same as
CW / F.A = 2		unless necessary for public safety or SPB control. USDI F&WS consultation necessary.	Alternative 1.	Alternative 1.	Alternative 1.	Alternative 1.
6	C. Motorized or	C. RCW population >	C. Minimized through	C. Same as	C. Same as	C. Same as
	heavy equipment use within colony site.	50 - min. April-June. RCW populations < 50 - excluded April-June.	project and/or contract adminis- tration to protect colony site, cavity trees, and relict trees. Nesting season restriction applies.	Alternative 2.	Alternative 1.	Alternative 2.
	D. Log decks or other areas of concentrated equip- ment use.	D. Not specifically prohibited in colony site.	D. Prohibited in colony site.	D. Same as Alternative 2.	D. Same as Alternative 1.	D. Same as Alternative 2.

TABLE 2 - ACTIVITIES ASSOCIATED WITH CUTTING AND HABITAT MANAGEMENT WITHIN 3/4 MILE OF COLONY SITE AND COLONY SITE PROTECTION

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	Specific Activities	Alternative l (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
	E. Prescribed burning.	E. To control hdwds. Minimize risk to cavity trees.	E. Designed to control hdwds. and minimize risk to cavity trees. Protect cavity trees from burning. No plow lines within colony site.	E. Same as Alternative 2.	E. Same as Alternative 1.	E. Same as Alternative 2.
	F. RCW nesting season (generally March 1 - July 31).	F. RCW population 5 50 minimize activity. RCW population 50 exclude activity.	F. No potential disturbing activities allowed within colony site unless required to continue clan viability.	F. Same as Alternative 2.	F. Same as Alternative 1.	F. Same as Alternative 2.
RCW	G. Other concentrated human use activities such as ORV trail or camp sites.	G. Not specifically addressed. Implies they could be allowed.	G. Prohibited within colony site.	G. Same as Alternative 2.	G. Same as ALternative 1.	G. Same as Alternative 2.
/EA-27	H. Linear rights-of-way such as roads and powerlines.	H. Allowed - construct- lon outside breeding season.	H. New construction prohibited within colony site.	H. Same as Alternative 2,	H. Same as Alternative 1.	H. Same as Alternative 2.
	 Existing roads through colony sites 	I. Not addressed specifically.	 Close roads that are adversely impacting RCW, 	I. Same as Alternative 2.	I. Same as Alternative 1.	I. Same as Alternative 2.
	J. SPB suppression	J. Guidelines for SPB suppression near RCW colonies in SPB EIS and ROD will be followed.	J. Same as Alternative 1.	J. Same as Alternative 1.	J. Same as Alternative 1.	J. Same as Alternative 1.

Specific Activities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
	· · · · · · · · · · · · · · · · · · ·	;			
III. Colony site	reduce hardwood mid-	Management guidelines in	gement guidelines in the Texas Comprehensive Plan would apply to Alternatives	lan would apply to Alte	ernatives 2-5.
Management	story to less than 20	They consist of:			
	sq. ft. BA/ac. All				
	stems 1" diameter with-	mid-story removal and c	d-story removal and control within colony sites and R/R stands on a biological priority	s and R/R stands on a b	biological priority
	in 50 ft. of cavity	basis. Includes remove	Includes removal of all hardwoods and a 10 acre minimum treatment	10 acre minimum treatme	ent
	trees removed.	configured to minimize	configured to minimize effects on key hardwood areas such as riparian areas	reas such as riparian a	ıreas.
	designate 200 foot			1	
	boundary around aggra-	overstory pine thinning	overstory pine thinning within colony sites and R/R stands if needed to reduce SPB risks	R/R stands if needed to	reduce SPB risks.
	gate of cavity trees	A 20-25 foot tree space	20-25 foot tree spacing used as a guide for thinnings.	hinnings.	
	and manage as colony		1)	
	site.	replacement stands woul	stands would be selected for all active colonies and should be as close as	ive colonies and should	be as close as
	mark cavity trees and	possible to the colony	ssible to the colony site and not more than 1/2 mile from the colony site	2 mile from the colony	site.
	map colonies.				
	thin to 20-25 spacing	recruitment stands woul	recruitment stands would be selected on a compartment basis for those compartments in	tment basis for those c	compartments in
	hetween trees within	which the nonulation of	which the nonitation goal is greater than the number of exterior congruences and	mber of existing coloni	too The number of
	Colony cite	recruitment stands ucui	Market and populations of the companies of the companies of the companies of the companies of the following the companies of	meer or existing colour	res. Ine number of
	COLOMY SICC.	recturent stands wou	ra edaar rue combartment R	odi minds the number of	colonies in that
	establish recruitment	compartment. The recru	compartment. The recruitment stand should be between 1/4 and 3/4 of a mile	tween $1/4$ and $3/4$ of a	mile
	and replacement stands	from the colony site.			
	and manage as colony				
	site.	colony site monumentati	colony site monumentation would be updated before any planned habitat alteration project can	e any planned habitat a	alteration project can
	designate and manage	occur within 1/4 mile of	of a colony site.		
	at least 125 acres of				
	pine 30 years old or	cavity restrictions wor	cavity restrictions would be used when needed to protect cavities threatened by	protect cavities threa	atened by
	older and contiguous to	enlargement or when nee	enlargement or when needed to rehabilitate enlarged cavities when cavities appear limiting	ged cavities when cavit	ties appear limiting.
	the colony site as				
	foraging habitat.	argumentation of single	gumentation of single male clans with subadult females would be done to maintain viability	females would be done	to maintain viability
		of single male colonies	single male colonies and maintenance for long	term genetic diversity.	
		artilicial cavitles wou especially in support	artilicial cavities would be used to supplement existing cavities when cavities are limiting especially in support of augmentation efforts.	existing cavities when	cavities are limiting
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Specific Activities	Alternative l (No Action) Pre 3/27 Direction	Alternative 2	Alternative 3 Modified Tune 16 Proposal	Alternative 4	Alternative 5 June 16 Proposal
IV. Foraging Habitat	IV. Management object- ives are tied to acres by providing pine and pine-hardwood stands totaling a min. of 125 acs. which are 30 years old or older and contigu- ious with the colony site.	IV. Management objectives are tied to suitable trees by providing at least 6,350 pine stems 2 than 10" DBH and 8,490 sq. ft. of pine BA within 1/2 mi. and contiguious with the colony site. Acreage may vary with site and stand conditions but should normally be available within 125 acres of well stocked pine or pine-hardwood.	IV. Same as ALternative 2.	IV. Same as ALternative 1.	IV. Same as ALternative 2.
V. Monitoring	V. Annual colony checks in prescribed prescriptions to determine status and 10 year trend survey.	V. Annual colony checks to determine status and presence of single birds in smaller populations. 100% survey of baseline and prescribed compart- ments in larger populations.	V. Same as Alternative 2.	V. Same as Alternative 1.	V. Same as Alternative 2.

TABLE 3 - Alternative Responses to Issues

Issues	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
1. Include all RCW populations on National Forest under interim policy.	1. Forest Service Handbook 2609.23R direction applies to all populations.	1. Applies to management within 3/4 mi. of active colonies in populations with less than 250 active colonies. Populations with greater than 250 active colonies have exhibited stable or increasing population trend and will be managed following direction in FSH 2609.23R The Francis Marion population in South Carolina was to be excluded from this policy, however, due to the impact of Hurricane Hugo, it has been decided to include this population in the interim population in the interim policy until an assess-	1. Applies to mgmt. within 3/4 mi. of all colonies in populat- ions with less than 250 active colonies. Populations with greater than 250 act- active colonies have exhibited stable or increasing population trend and will be managed following direction in FSH 2609.23R. Treat- ment of Francis Marion population same as Alternative 2.	1. Same as ALternative 2.	1. Same as Alternative 2.
2. Socio-economic effects on local economics, timber industry and County governments if cutting of National Forest timber is reduced.	2. Should not affect current planned outputs.	2. Potential effects analyzed and displayed for review and consideration by decisionmaker under environmental consequencies.	2. Same as Alternative 2.	2. Same as Alternative 2.	2. Same as Alternative 2.

TABLE 3 - Alternative Responses to Issues

Alternative 5 June 16 Proposal Thinning Only	3. Only thinning would be allowed during the interim period.	a. No regener- ation would occur during interim period.	b. Same as Alternative I with a recommed- ed range of 60-100 sq.ft./ac basal area for thinning. No regeneration cuts would occur during interim period.
Alternative 4 March 27 Policy	3. Only thinning would be allowed during the interim period unless regeneration needed for understocked, damaged stands or conversion to longleaf and RCW would not be adversely affected. Requires Regional Forester's approval.	a. Regeneration under even-aged management would be minimal and limited to circumstances discussed above under item 3, Alternative 4.	b. Same as Alternative l, however, a minimum of 60 sq. ft./ac basal area is recommended for thinning. No shelter- wood cuts would be made.
Alternative 3 Modified June 16 Proposal	3. Same as Alternative 2.	a. Same as Alternative 2.	b. Same as Altn. 1, with leave basal areas for Sheltwd/seed-tree cuts. Shelterwd Min. 30 sq. ft. for loblolly and short- leaf; min. 40 sq.ft. for longleaf and slash. Thinning - 60-100 sq. ft.
Alternative 2 June 16 Proposal	3. Emphasis would be on thinning pine stands. Regeneration would be by the shelterwood method unless certain criteria met to allow clearcutting that would improve RCW habitat.	a. Even-aged management would continue but emphasis on shelterwood and seedtree methods of regeneration. Clearcutting would be done only under specific criteria to benefit RCW habitat.	b. Same as Alternative I, with the following for leave basal areas for shelterwd/seed-tree cuts. shelterwood - 20-30 sq. ft. for loblolly and shortleaf; 25-40 sq.ft. for longleaf and slash. Thinning - 60-100 sq.ft.
Alternative 1 (No Action) Pre 3/27 Direction	3. Habitat management would follow FSH 2609.23R.	a. Even-aged management would con- tinue with artificial and natural regener- ation.	b. Residual basal area tied to site. species and stand conditions.
Issues	3. Prohibit all cutting within 3/4 mi. of colonies and protect existing habitat until EIS is completed.	4. Modify existing forest management within 3/4 mile of RCW colonies. a. Change from even-aged management using clearcutting to uneven aged using selection management.	b. Lower thinning basal area guidelines and raise shelterwood basal area guidelines.

TABLE 3 - Alternative Responses to Issues

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Issues	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
c. Extend rotation ages.	c. Current RCW rotation ages apply as guidelines.	c. Cutting not allowed unless more than 50% of the suitable habitat is 60 years or older and at least 50% must be retained.	c. Cutting not allowed in the oldest 1/3 of suitable habitat within 3/4 mile of colony site.	c. Regeneration determined by stand conditions, not rotation age.	c. No regener- ation would occur during interim period.
 d. Re-establish and protect longleaf and associated species ecosystems. 	d. Not specifically addressed in the handbook. Direction for protection and establishment covered in individual FLMP's.	d. Provided for by the alternative.	d. Same as Alternative 2.	d. Same as Alternative 2.	d. Same as Alternative 2.
e. Gradually remove midstory or not at all.	e. Existing guidelines would be followed. Site conditions and biologist's evaluation would determine rate and extent of midstory removal.	e. Provides for an aggressive midstory control program in colony sites on an RCW priority basis.	e. Same as Alternative 2.	e. Same as ALternative 2.	e. Same as Alternative 2.
f. Do not control SPB.	f. Direction in SPB EIS would be followed when SPB spots occur within 1/2 mile of RCW colonies to ensure spot suppression is necessary and can be carried out without adversely affecting RCW.	f. Same as Alternative 1.	f. Same as Alternative 1.	f. Same as Alternative 1.	f. Same as Alternative 1.

TABLE 3 - Alternative Responses to Issues

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Issues	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinging Only
g. Disregard FSH 2609.23R because it is ineffective.	g. Direction in exist- ing Handbook would be followed.	g. Handbook used for RCW rotation ages and foraging habitat manage- ment guidelines.	g. Handbook direction for preserving oldest age classes supplemented by the alternative.	g. Handbook direction would be followed for foraging habitat management guidelines.	g. Same as Alternative 3,
h. Regeneration areas should be maximum of 10 acres.	h. Size of regeneration areas would be determined by a site-specific analysis considering potential adverse impacts such as colony isolation and habitat fragmentation.	h. Same as Alternative 1.	h. Regeneration areas limited to an average of 25 acres or less. No more than 8.5% of the area can be in the 0-10 year age class.	h. Same as Alternative 1.	h. Same as Alternative 1.
A i. Don't manage circles, manage blocks identifiable on the ground.	i. Uses compartment system for identifying management options.	i. Uses 3/4 mi. from colony center for identifying management options.	i. Same as Alternative 2.	i. Same as Alternative 2.	i. Same as Alternative 2.
J. Manage according to site and condition of RCW and its habitat.	j. RCW requirements are expressed as ranges to allow for adaptation to on-site conditions.	j. Same as Alternative 1.	j. Same as Alternative 1.	j. Same as Alternative 1.	j. Same as Alternative l.
k. Specify foraging needs in trees per acre and diameter class rather than basal area.	k. Emphasis on 125 acres of foraging within 1/2 mile of colony site.	k. Emphasis on actual number of > 10" DBH pine stems available within 1/2 mi. of colony site.	k. Same as Alternative 2.	k. Same as Alternative 1.	k. Same as Alternative 2.

TABLE 3 - Alternative Responses to Issues

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	Alternative 1		Alternative 3		Alternative 5
	(No Action)	Alternative 2	Modified	Alternative 4	June 16 Proposal
Issues	Pre 3/27 Direction	June 16 Proposal	June 16 Proposal	March 27 Policy	Thinning Only
5. Increase survey so	5. Annual colony	5. Annual colony checks	5. Same as	5. Same as	5. Same as
National Forest RCW colonies	_	to determine status and	Alternative 2.	Alternative 1.	Alternative 2.
are located and protected.	status and 10 year	presence of single birds.	_		
Increase monitoring so	trend survey.	100% transect in pre-	_		
various forest management	_	scribed compartments,			
practices can be adequately	_	sample compartments			
evaluated.	_	repeated in populations			
	_	greater than 100 active	_	-	
	_	colonies. Survey suitable	_		
		habitat not previously			
		surveyed.			
6. Impacts to non-timber	6. Site specific	 6. Same as Alternative 1.	6. Same as	6. Same as	6. Same as
snd non-RCW resources.	environmental analyses would identify and		Alternative 1.	Alternative 1.	Alternative 1.
	evaluate potential impacts to RCW and				
	other resources.				
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III. ENVIRONMENTAL CONSEQUENCES

This chapter discloses the environmental consequences that may result from implementing each of the 5 alternatives as interim standards and guidelines for RCW habitat protection and management. The environmental consequences are displayed by the associated activities that could affect, either directly or indirectly, the biological, physical, social, or economic components of the human environment. Direct effects are those that are caused by the activity and occur in the same place and time. Indirect effects are those caused by the activities that are removed in time and/or place, but that are still reasonably foreseeable. For purposes of discussion, the physical component considers the soil, water, and air: the biological component the plant or animal life; and the social and economic component considers those attributes or conditions affecting the economic livelihood or the physical, mental and spiritual well-being of the human population.

Each National Forest affected by the interim standards and guidelines has identified output levels for goods and services in their Land and Resource Management Plan (LRMP). An EIS was prepared for each plan and assessed the environmental consequences associated with producing these levels of outputs. The plans also identified standards and guidelines to avoid or mitigate these consequences. The standards and guidelines, as they relate to RCW, were based on the RCW Chapter of the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R, Ch. 400). Alternative 1 (no action) would leave Forest Plan implementation as it was prior to the March 27, 1989, Policy, so Forest Plan RCW related standards and guidelines would not change if alternative 1 is selected. Therefore, alternative 1 can be used as a base line for estimating the changes in outputs and environmental consequences associated with these outputs that could result from implementing alternatives 2 through 5. This EA should be read in conjunction with Forest Plan EIS's in order to understand the changes in environmental effects that are to be expected from the direction of these standards and guidelines.

Because of the limited scope of the proposal, particularly the time the interim standards and guidelines would be in effect (about 2 years), no cumulative effects are anticipated. Also, no irretrievable or irreversible commitment of resources would result by selecting any of the alternatives as interim standards and guidelines.

A. BIOLOGICAL

1. Red-cockaded Woodpecker

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a. Activity: Thinning Within 3/4 Mile of Colony Site.

Alternative 1

Direct Effects: Relict trees and potential cavity trees outside the colony site and

R/R stands would not be protected and usually selected for removal. These trees are often less desirable to leave in a stand because of slow growth, lack of vigor and their susceptibility to insects and disease. Removal of these trees could limit the oppor-

tunities for RCW population growth.

Indirect Effects: Removal of relict trees and potential cavity trees could contribute

to population decline and affect achievement of long-term popula-

tion objectives.

Alternatives 2 - 5

Direct Effects:

Relict trees and potential cavity trees outside the colony site and R/R stands would be retained during thinning operations. This would benefit RCW by providing potential nesting habitat which increases the opportunities for establishment of new colonies. Retention of these older slower growing trees increases stand susceptibility to SPB which could adversely affect RCW.

Indirect Effects:

Since it takes about 60 years to produce a suitable cavity tree, retention of these older trees provides an opportunity for colonization 30-40 years sooner than Alternative 1. Possibility of achieving long-term population objectives is enhanced.

b. Activity:

Regenerating Using the Clearcut Method.

Alternative 1

Direct Effects:

Providing adequate amounts of habitat suitable for recruitment is essential for establishing new colonies and population growth. This alternative provides recruitment habitat primarily through the designation of recruitment stands. These stands are to be a minimum of 10 acres, located 1/4 to 3/4 mile from active colony sites and at least 60 years old. In addition, 40% (50 acres) of the 125 acre foraging area is to be 60 years old or older. There is no provision for retention of relict trees, potential cavity trees or inclusions of longleaf pine within regeneration areas. These areas will generally take 30 years to provide foraging habitat and a minimum of 60 years to provide nesting habitat. Given the current decline of smaller populations such conditions would likely result in the continued decline in the number of active colonies.

This alternative would not provide as much suitable habitat for nesting opportunities as other alternatives. Potential for nesting is proportional to the acreage retained in older aged suitable habitat. Assuming a 70-80 year rotation, most 3/4 mile zones under this alternative, would have about 20-31% of the pine and pine-hardwood habitat greater than 60 years of age suitable for RCW nesting. Potential cavity tree formation at 60 years of age (heart rot) is relatively low and may not offset cavity tree mortality. Preferred nesting habitat would only be available in the colony site, recruitment and replacement stands (6% of the area).

The amount of time or duration that habitat is available for recruitment and nesting is important. This alternative would allow 70-80 year rotation within 3/4 mile of RCW colonies so suitable recruitment and nesting habitat will be available to RCW for a shorter period of time than other alternatives. Generally, it takes at least 60 years for a pine tree to have enough heart rot to become suitable for cavity excavation and nesting. For loblolly and shortleaf pine on a 70 year rotation, the tree could only be available 10 years. For

longleaf pine on an 80 year rotation, the tree would be available 20 years.

RCW may be adversely affected due to fragmentation of its habitat. This alternative is more likely than Alternatives 2-5 to adversely affect RCW by fragmenting its habitat and isolating the colony site from adequate foraging areas. Assuming a 70-80 year rotation, from 38% to 42% of the potentially suitable habitat could be non-foraging habitat less than 30 years old.

Since more cutting is allowed under this alternative, the opportunities for disturbance from motorized equipment which could adversely affect the RCW is greater than Alternatives 2-5.

Indirect Effects:

Short-term population declines will likely continue and long-term population objective will be difficult to achieve. Provisions for adequate amounts and dispersal of suitable habitat to maintain or enhance current population levels are lacking given the existing habitat and population conditions. If the population trend continues to decline, achievement of the population objectives will be difficult, if not impossible, and some populations may be extirpated.

Alternatives 2-4

Direct Effects:

There will be more habitat suitable for recruitment and nesting under alternatives 2, 3 and 4 than alternative 1. These alternatives contain criteria when stand regeneration is considered within 3/4 mile of RCW colonies that will provide significantly more older aged stands suitable for recruitment and nesting habitat. In areas that do qualify for regeneration, these alternatives provide for an element of nesting and foraging habitat (relicts, potential cavity trees, and pine inclusions) to be retained in the regeneration areas during the interim period.

The affects of habitat fragmentation and colony isolation under these alternatives will be less than Alternative 1. Besides the provisions of these alternatives to retain significantly more older age classes, they also require stricter limits on the amount of pine in non-foraging conditions (less than 30 years old). These alternatives only allow a maximum of 8.5% in the 0-10 year age class and a maximum of 25% less than 30 years old within the 3/4 mile zone. Alternative 3 takes an additional step to avoid colony isolation by providing corridors (see glossary for definition) to maintain habitat continuity between colonies.

It is anticipated that potential disturbance from motorized equipment which could adversely affect RCW will be reduced from that expected under alternative 1 during the interim period, due to greater colony site protection and restrictions on road construction through the colony site that is provided by these alternatives.

Indirect Effects:

Alternatives 2, 3 and 4 provide an opportunity to enhance RCW habitat using clearcutting if the site-specific analysis indicates RCW will benefit for this action. Provided other criteria are met, clearcutting could be done to convert off-site pine growing on longleaf pine sites back to longleaf, or regenerate sparse or damaged stands that are not suitable RCW habitat.

Retention of potential nest trees in clearcuts provides an opportunity for regeneration and colonization simultaneously during the interim period. However, the suitability for colonization will diminish as pine seedlings grow into the mid-story. Also, retaining these trees in a regeneration area will reduce the number of trees available for foraging in the future stand because of competition for sunlight, moisture and nutrients.

Alternative 5

Direct Effects:

Alternative 5 allows no regeneration using the clearcut method, so the potential impacts associated with Alternatives 1-4 would not occur.

Indirect Effects:

None anticipated during the interim period.

c. Activity:

Regeneration Using the Shelterwood or Seed-tree Method.

Alternative 1

Direct Effects:

As with using the clearcutting method, provisions for providing suitable nesting habitat to promote the establishment of new colonies when regenerating with the shelterwood or seed-tree method, may cause further decline of active colonies under the current RCW habitat and population conditions. The potential adverse effects associated with shorter rotations and less available habitat in the older age classes discussed under regenerating using the clearcut method for this alternative, also apply to this activity.

The traditional shelterwood and seed-tree method only requires the retention of an adequate number of trees meeting the requirements for seed-trees. Consequently, relict trees, potential cavity trees or foraging habitat are not retained in regeneration areas. These trees are usually removed during the seed-tree or shelterwood cut. RCW could be adversely affected if available nesting habitat is limited. Some potential for colonization does exist as the shelterwood or seed-trees are generally retained 2 to 7 years (depending on species and site preparation) until regeneration is established. The Seed-trees will provide some potential nesting and foraging habitat until they are removed. If RCW colonize the shelterwood or seed-trees, the area would be identified as a colony site. It would be managed as such and the shelterwood or seed-trees would not be

removed. If not colonized and the seed-trees removed, it will take the stand 33 to 44 years to provide foraging habitat and 63 to 74 years to provide nesting habitat.

Indirect Effects:

Stopping or slowing the declining population trend during the interim is not likely. Opportunities for the establishment of new colonies is less than Alternatives 2-5, especially if nesting habitat is limited. Achievement of long-range population goals under the current habitat and population would be more difficult than other alternatives.

Alternatives 2 and 3

Direct Effects:

These alternatives require a non-traditional shelterwood and seed-tree method when regeneration is allowed, and criteria that must be met when planning regeneration so nesting habitat is not depleted. Alternative 2 requires the retention of at least 50% of the suitable habitat (250 acre average) within 3/4 mile of the colony that is 60 years old or older. Alternative 2 also requires that cutting be planned in the predominant age classes and not necessarily the oldest. These criteria under Alternative 2 should reduce the loss of nesting habitat (70-100 year age classes) that could occur under Alternative 1 as well as enhance recruitment objectives. These provisions ensure that potential cavity tree formation exceeds cavity tree mortality.

Alternative 3 requires the oldest 1/3 (regardless of age) of the suitable habitat within 3/4 mile of the colony site to be retained. The benefits to RCW described under Alternative 2 would apply and possibly be increased. Retaining the oldest 1/3 of the existing habitat will ensure retention of the stands most suitable or likely to be most suitable for nesting. As with alternative 2, this alternative should ensure potential cavity tree formation exceeds cavity tree mortality.

For both alternatives 2 and 3, retaining of 5-6 relicts and/or potential cavity trees per acre, along with the seed-trees enhance the opportunities for colonization over Alternative 1. Retention of 5-6 relicts or potential cavity trees will also significantly increase the quality of nesting habitat once the stand reaches foraging age. These older aged trees should stimulate colonization in the first 10 year period.

Indirect Effects:

Alternatives 2 and 3 increase the chance of stopping or slowing the declining population trend over Alternative 1 during the interim period. They also enhance future chances and opportunities of achieving the long-range population objectives better than alternative 1. This is due to the retention of the older pine stands, limitations on the amounts of non-foraging habitat that can occur within 3/4 mile of colonies, and providing suitable nesting habitat in regeneration areas. In areas where nesting habitat is not limited and significant amounts of older pine age classes are located within 3/4

mile of RCW colonies, regeneration will enhance long-range population objectives by ensuring a supply of future suitable habitat.

Retaining additional trees on regeneration areas will take longer than Alternative 1 for these stands to become suitable foraging and nesting habitat and reduce the number of pine trees available because of the competition for sunlight, moisture and nutrients. It will likely take 35 to 53 years to establish foraging habitat and 65 to 83 years for suitable nesting habitat. The additional trees will enhance the development of shade tolerant hardwoods in the regeneration areas. Hardwoods, could cause mid-story problems and adversely affect the RCW. Also, the increased competition will slow pine growth and the use of fire to control hardwoods will be delayed. The usefulness of relict trees and potential cavity trees for nesting will diminish over time as the pine grows into the mid-story.

If the trees retained in the regeneration areas are colonized, there could be problems maintaining the site in a suitable condition. In addition, the site will not remain as suitable for as long as sites are colonized in fully stocked stands. This is due to the initial low stocking levels of pines and a continued loss of trees due to mortality.

Alternatives 4 and 5

Direct Effects:

These alternatives maximize the amount of foraging and potential nesting habitat as no shelterwood or seed-tree regeneration would occur during the interim. RCW is least likely to be adversely affected during the interim period under these alternatives. Stopping or slowing the declining population trend and enhancing future chances and opportunities of achieving long-range population objectives is most likely under these alternatives.

Indirect Effects:

These alternatives would perpetuate the current stand age class distributions. If evenly distributed, the RCW would benefit. If age classes are predominately older and suitable foraging and nesting habitat are not limiting, perpetuating this condition could limit amounts and quality of future habitat needed to achieve the long-range population objectives.

d. Activity

Survey and Monitoring.

Alternatives 1 & 4

Direct Effects:

The new information that has become available indicating a decline in the smaller populations suggest that monitoring procedures under these alternatives are not sensitive enough and do not provide enough information for populations with less than 250 active colonies. Colony status is usually determined when a compartment prescription is done once every ten years. Activity was noted indicating colony status, however, no information is gathered indicat-

ing clan size. A 10 year trend survey was developed using information that could be up to 10 years old. Consequently, a true indication of the current population trend was not being portrayed. Continued use of this monitoring system could lead to false assumptions of the true population condition and colony status for the smaller populations and allow activities within 3/4 mile of RCW colonies to occur that could unknowingly affect RCW colonies.

Indirect Effects:

For the smaller RCW populations, continued use of the monitoring system may lead to failure to discover further decline and make achievement of long-range population objectives difficult or impossible.

Alternatives 2, 3 and 5

Direct Effects:

These alternatives provide more monitoring of known colonies than in Alternatives 1 and 4. All colonies will be checked annually to determine status and the presence of single bird colonies. This system will allow for the continued assessment of the effects forest management practices and disturbances may have on RCW using current data for each colony. The monitoring information will also provide current information in planning habitat management to benefit RCW such as augmentation.

The survey procedures to locate uninventoried colonies are more intense than in alternatives 1 and 4. These alternatives call for a 100 percent transect survey in compartments being prescribed. By surveying more suitable habitat than under Alternatives 1 and 4, new RCW colonies will be located, protected and managed to enhance their habitat.

Indirect Effects:

This survey and monitoring system will enhance the achievement of long-range population objectives.

e. Activity

SPB Suppression.

Alternatives 1-5

Direct Effects:

Actions for SPB suppression within 3/4 mile of RCW colonies will be guided by the EIS and Record of Decision (ROD) for the Suppression of the SPB-Southern Region, February 1987. Controlling SPB spot spread will preserve RCW habitat. Cavity trees will be protected.

Indirect Effects:

SPB risk reduction in foraging and nesting habitat losses will afford additional opportunities for RCW population expansion.

2. Wildlife

a. Activity

Prescribed Burning.

Alternatives 1-5

Direct Effects:

Prescribed burning is the primary tool used to control hardwoods under alternative 1. Under alternatives 2-5, it is used primarily to maintain the open park like pine stands once the hardwoods have been controlled. Regardless of the objectives, the effects on wildlife would be similar. Since most animals that co-exist with RCW evolved or adapted to the occurrence of fire in the ecosystem the associated wildlife populations are not expected to be adversely affected and in some cases may benefit.

Indirect Effects:

Prescribed burning increases the amount, availability, and palatability of forage; changes in production of soft mast; changes in invertebrates populations; and the creation and destruction of snag trees.

Prescribed burning decreases the amount of fuels available to potential intense wildfires that could affect the habitat of wildlife including RCW.

b. Activity

Mid-story Removal and Control.

Alternative 1

Direct Effects:

Alternative 1 requires the hardwood mid-story to be reduced to less than 20 square feet of basal area per acre and all stems one inch or greater in diameter within 50 feet of cavity trees removed. This can be accomplished manually or with herbicides or in combination. Removing these stems affects wildlife species' habitat in different ways. For example, removing the mid-story will allow additional sunlight to the forest floor and stimulate vegetative growth there and provide additional forage for white-tailed deer. On the other hand, removal of mid-story will reduce the habitat of songbirds like hooded warblers (Wilsonia citrina) which use woody understory. Impacts are expected to be minimal because of the limited area being treated. The site-specific analysis NEPA documentation and appropriate Vegetation Management FEIS's for the Southern Region will be used to disclose such effects.

Indirect Effects:

Because of the mobility of the species that may be affected and the limited amount of habitat treated, no indirect effects are anticipated.

Alternatives 2-5

Direct Effects:

The effects will be similar to Alternative 1, but since these alternatives require a larger area to be treated (minimum of 10 acres) and all hardwood removed, wildlife species dependent on mid-story

vegetation are likely to be impacted more. The total habitat affected is approximately 13,500 acres (1345 colonies x 10 acres per colony) which is approximately 2% of the total pine and pine/hardwood habitat within the 3/4 mile zone. Hardwood control should be held to a minimum in natural hardwood areas, i.e., stream bottoms, stringers, etc.

Indirect Effects:

Because of the mobility of the species that may be affected and the limited amount of habitat treated, no indirect effects are anticipated.

3. Endangered, Threatened or Sensitive Species (other than RCW)

a. Activity Implementation of Interim Standards and Guidelines for RCW

Habitat Protection and Management.

Alternatives 1-5

Direct Effects: There are 6 other known threatened or endangered species that

could be affected by implementing these alternatives as interim standards and guidelines. The Biological Evaluation discloses that none of these species is likely to be adversely affected. (See Appendix B, Biological Evaluation). However, before any ground disturbing action is implemented under any of the alternatives, a site-specific analysis and biological evaluation will be done to ensure each project level proposed action is not likely to adversely affect any proposed, endangered, threatened or sensitive plant or animal

species.

Indirect Effects: Populations of associated species could increase, enhancing long-

term recovery efforts for these species.

4. Timber Stand Establishment and Development

a. Activity: Implementation of Interim Standards and Guidelines for RCW
Habitat Protection and Management.

Alternative 1

Direct and Indirect Effects:

Traditional silvicultural methods for regenerating and thinning stands within 3/4 mile of RCW colonies would be used during the interim period. Trees retained in stands would not be selected using RCW desirability criteria. No additional trees would be retained for RCW in the clearcuts or shelterwood/seed-tree cuts that could affect stand establishment and retard stand development. Using the clearcut method with site preparation and tree planting, it will take the new stand about 30 years to provide suitable foraging habitat and 60 years for suitable nesting habitat.

Alternatives 2 and 3

Direct Effects:

The traditional silvicultural practices for cutting have been modified under these alternatives to emphasize protection of essential RCW habitat.

Thinning practices have been modified. Emphasis is on retaining relict trees and other older and/or larger trees that could be suitable nesting habitat. Since growth has usually slowed on these trees, the rate of mortality due to insects and disease could increase over what would occur under Alternative 1. Stand development would likely take longer due to the retention of less vigorous and more vulnerable trees within the stand.

Stands would be established under these alternatives using nontraditional regeneration methods. Clearcuts would retain relict trees, potential cavity trees and clumps of pine that could be used by RCW as nesting and foraging during stand establishment and development. While benefiting RCW, these provisions will retard stand development. Stocking levels or number of new trees developing in the new stand will be lower and growth slowed as compared to clearcutting under Alternative 1 because of the older trees competing for sunlight, soil moisture and nutrients. Regeneration using the shelterwood or seed-tree method will be done differently than the traditional methods used under Alternative 1. The nontraditional shelterwood or seed-tree method of regenerating stands under these alternatives will retain relict trees and potential cavity trees in addition to the seed trees. The additional trees retained for RCW will increase competition for sunlight, soil moisture and nutrients thus reducing stocking and retarding development similar to the effects described in leaving trees in clearcuts. Stand establishment and development may take from 5 - 23 years longer than the traditional methods used under Alternative 1.

Indirect Effects:

Stocking and growth rates in these stands could be reduced. Mortality within the stand over a rotation period could be increased because trees retained would be more susceptible to insects and disease.

Alternative 4

Direct Effects:

No regeneration using the seed-tree or shelterwood methods would be done. The effects on stand development when thinning would be the same as Alternatives 2 and 3. The effects on stand establishment and development when clearcutting would be the same as using the clearcut method under Alternatives 2 and 3.

Indirect Effects:

Similar to Alternative 2 and 3 but reduced because less regeneration would occur.

Alternative 5

Direct Effects:

Only thinning is allowed. The effects on stand development discussed under Alternatives 2 and 3 would apply for stands thinned

under Alternative 5.

Indirect Effects:

Same as Alternative 2 and 3 for stand development.

B. PHYSICAL

1. Soil, Water and Air Quality

a. Activity:

Implementation of Interim Standards and Guidelines for RCW Habitat Protection and Management.

Alternative 1

Direct and Indirect Effects:

There would be no effects associated with implementing this alternative on soil, water and air quality other than those discussed in each Forest Land and Resource Management Plan EIS.

Aiternatives 2-5

Direct and Indirect Effects:

It is likely that harvesting activities and projects anticipated in Forest Plans will be fewer during the interim period if these alternatives are implemented to protect RCW. If the amount of harvesting activities is reduced, there will be a subsequent reduction in the environmental consequences to soil, water and air quality associated with the various projects and activities anticipated as identified in each Forest Plan EIS. Further NEPA environmental analysis with appropriate documentation will be done on each proposed project to identify the site-specific environmental consequences of each proposed action within 3/4 mile of RCW colonies during the interim period.

b. Activity:

Implementation of Interim Standards and Guidelines for RCW Habitat Management - mid-story Removal and Control.

Alternatives 1-5

Direct Effects:

Soil - The direct effects of mid-story removal and control by use of manual (handtool) methods would be negligible on the soil. The litter and duff layer is not disturbed and revegetation is not suppressed. Herbicides used for mid-story removal and control may affect soil productivity if application deviates from prescribed rates. Forestry herbicides are formulated to affect the more complex

metabolic processes of higher plants that are absent in micro flora. Since herbicides do not physically disturb soil, treated areas would not have erosion caused by the application. (FEIS, Vegetation Management in the Coastal Plain/Piedmont, January, 1989.) The use of prescribed fire (underburning) for mid-story removal and control during the growing season may affect soil productivity if improperly applied. Underburns more frequent than every three years do not allow the litter/duff biota to recover as a burn would with 3 to 4 year intervals. A burn with intervals of more than 5 year intervals would have little effect on biota and soil structure. Erosion and nutrient leaching may occur but underburns are usually light to moderate in intensity, so plants would be retained on site to minimize erosion. Nutrients would be retained through uptake by unburned plants.

Indirect Effects: Soil - None anticipated.

Direct Effects: Water - The use of manual (handtool) methods for mid-story re-

moval and control would not affect water quality. Peak flows are not increased and stream nutrients and sediment loads are not increased because litter and duff are left intact and revegetation is not affected. The standard procedure for using herbicides to control mid-story vegetation is by applying a basal spray or single stem application. There would not be any herbicides broadcast or applied to the ground so ground water contamination is not likely. Erosion and sediment would not occur since the type of herbicide applications to be used would not disturb the soil. The use of prescribed fire may increase stream nutrients, stormflows and sediment loads. The amount of Increase depends directly on fire severity. Underburns that would be used are light to moderate in Intensity and if intervals between burns described under "soil" are followed,

then no adverse conditions would develop.

Indirect Effects: Water - None anticipated.

Direct Effects: Air - Mid-story removal and control by manual (handtool) methods,

including the use of single stem or basal spray applied herbicldes would not affect air quality. Prescribed fire is the only mid-story removal and control method that affects the air quality in and around the colony site. On a given site, underburns may occur once every 3-7 years. Effects on air quality is brief and intermittent in each area affected. The major effects of smoke on air quality are visibility reduction and a respiratory impairment near the burn. This is especially true near roads, airports, and in populated areas in and around the National Forests. These effects are reduced and controlled by following strict USDA Forest Service Prescribed Fire

burning plans and State and Federal Air Quality laws.

Indirect Effects: Air - No indirect effects on air quality are anticipated since actions

would comply with burning plans and applicable State and Federal

air quality laws.

C. SOCIAL

1. Recreation

a. Activity:

implement interim Standards and Guidelines for RCW Habitat Protection and Management.

Alternative 1-5

Direct and indirect Effects:

Recreation use in developed areas is not expected to be affected. Dispersed recreation could be affected if road or trials are temporarily closed to protect RCW and cannot be re-routed around colony site.

2. Recreation Development

a. Activity:

implement interim Standards and Guidelines for RCW Habitat Protection and Management.

Alternative 1

Direct and indirect Effects:

There should be no direct and indirect effects on planned recreation development from implementing alternative 1.

Aiternatives 2-5

Direct Effects:

Recreation development activities are prohibited within the colony site, but not within the remainder of the 3/4 mile zone. Any clearing of suitable habitat will adhere to criteria for clearings under each alternative. Recreation development could be curtailed within 3/4 mile of a colony site if the criteria could not be met. If a comparable site can not be located further than 3/4 mile from an RCW colony, the recreation experience of National Forest visitors could be adversely affected.

indirect Effects:

so long-term or indirect effects on these programs is anticipated because of the limited time the interim standards and guidelines would be in effect.

2. Cultural and Historical Resources

a. Activity:

Implementation of interim standards and guidelines for RCW habitat protection and management.

Alternatives 1-5

Direct and Indirect Effects:

None anticipated.

3. Roads, Trails, and Utility Corridors

a. Activity:

Implementation of Interim Standards and Guidelines for RCW Habitat Protection and Management.

Alternatives 1 and 4

Direct and Indirect Effects:

These alternatives would have little or no effect on these activities or programs as planned in Forest LRMP's. Construction and maintenance associated with these activities or programs is allowed, even within colony sites, if the actual work takes place other than during the RCW breeding season.

Alternatives 2, 3 and 5

Direct Effects:

No construction would be allowed in colony sites. This provision could adversely affect planned activities under these programs if relocation outside of the colony site was not feasible. Forest visitors could be adversely affected due to closure of existing roads which are likely to adversely affect RCW.

Indirect Effects:

No long-term or indirect effects on these programs is anticipated because of the limited time the interim standards and guidelines would be in effect.

D. ECONOMIC

- 1. Timber Harvest
- a. Activity

Implement Interim Standards and Guldelines for RCW Habitat Protection and Management.

Alternative 1

Direct and Indirect Effects:

No economic impacts are anticipated. Forest outputs of goods and services were planned considering standards and guidelines that followed the direction in the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R). Alternative 1 would implement the handbook during the interim period and Forest Plan Standards and Guidelines would be unchanged.

Based on data supplied by the Forest impacted by the proposed guidelines, approximately 81 million board feet of green timber could be harvested within 3/4 mile of RCW colonies in fiscal year 1990 under this alternative. This represents 7.1% of the total regional target of 1150 million board feet. Approximately 75 million board feet could be harvested from these areas in fiscal year 1991. These projected harvest volumes are the baseline to which the remaining four alternatives are compared (see table 4 below). The payments to the States (25% fund) would not be affected.

Alternatives 2-5

Direct Effects:

The primary economic consequences of these alternatives are related to the reduction of timber volumes that is expected because less timber is likely to be harvested from National Forest land under these alternatives. Sample data from affected forests, the Continuous Inventory of Stand Conditions (CISC) data base, and the FY 90 budget allocations were analyzed to assess the affects of alternatives on timber outputs and consequently economics. Table 4 shows the planned harvest volumes within the 3/4 mile zones by alternative.

Table 4 - Projected Timber Harvest Volumes in Million Board Feet and Percentage Which Can Be Cut Within 3/4 Mile Zones by Alternative.

Alternatives

Year	1	2	3	4	5
	84.4(100%) 77.2(100%)	68.1(81%) 62.9(81%)	70.1(83%) 65.9(85%)	64.4(76%) 59.6(77%)	58.3(69%) 52.4(68%)

On a regional or statewide basis, the commercial forest affected by these alternatives is minimal. There are 12.5 million acres of the 323 million acres of commercial forests in the Southern Region are National Forest System lands. The area affected by the interim standards and guidelines is 672,000 acres (total area within 3/4 mile of all RCW colonies with less than 250 active colonies) or 5.3% of total NF acreage. The analysis conducted for this assessment indicates that implementing any one of these alternatives will likely result in a noticeable decrease in planned timber outputs on three of the 10 National Forest affected by the interim guidelines. The National Forests in Alabama, the Kisatchie NF in Louisiana, the National Forests in Mississippi's planned harvest volumes would be reduced by 11.3%, 9.3%, 5.5% respectively due to RCW mitigation in fiscal year 1990. These three forest, and others, would experience additional reductions in planned harvest volume, but these are due to changes in funding, tornado, hurricane and SPB

losses, as well as small roundwood marketing problems. Data analyzed indicated that approximately 58 million board feet in FY 1990 and 52 million board feet in FY 1991 of green timber could be harvested just by thinning existing stands within 3/4 mile of RCW colonies under these alternatives. This represents 69 percent and 68 percent respectively of the planned harvest volume within 3/4 mile of RCW colonies. These thinning volumes apply to all alternatives, however, only Alternative 5 restricts harvesting to thinning only. There will likely be opportunities under Alternatives 2, 3 and 4 where the regeneration criteria are met allowing additional volume to be harvested. These areas will be evaluated on a case by case basis during the site-specific analysis.

The economic impacts that could occur on a local level could be greater. There are many rural small communities adjacent to National Forests in the South. In some cases, local forest product industries in these communities rely heavily on trees from the National Forest for raw materials. If the planned flow of raw materials from the National Forests is interrupted due to implementing one of these alternatives, then local industries and ultimately the community, could be affected. Also, the 25% fund payment to the States could be reduced. These reductions would only occur during the limited time the interim standards and guidelines will be in effect. Substituting harvest areas outside the 3/4 mile zone could help make up timber volume shortfall.

Indirect Effects:

No indirect effects are anticipated. Harvesting stands further than 3/4 mile from RCW colonies to substitute for volume lost from within 3/4 mile of the colony could cause a shortfall of volume in the later years when harvesting was planned in these stands.

2. Minerals and Energy Resources

a. Activity

Implementation of Interim Standards and Guidelines for RCW Habitat Protection.

Alternatives 1 and 4

Direct and Indirect Effects:

Generally, no additional consequences are expected to these programs over what has traditionally occurred in the past when an endangered or threatened species or its habitat is involved. These alternatives contain fewer provisions that could curtail mineral and energy resource exploration within 3/4 mile of RCW colonies during the interim period than alternatives 2, 3, or 5.

There are proposed developments known at this time that would require further project level evaluation and analysis once proposals and locations within 3/4 mile of RCW colonies are known. A provision of the Crude Oil Windfall Profit Tax of 1980 (Section 29), gives tax credits for the development and production of non-conventional fuels. The tax credit expires on December 31, 1990. Therefore, it is anticipated that gas exploration and possibly development, will be stepped up during the interim period. A number of companies are currently developing methane gas from coal seams in the Black Warrior Basin of western Alabama under this program and are trying to meet the tax credit deadline. Only the Oakmulgee District in Alabama is affected at this time. It is possible that proposals for clearing associated with this activity would exceed the limits allowed under the guidelines of an interim policy. If this occurs, project level proposals will be analyzed in compliance with NEPA. NFMA and ESA and other applicable laws and consequently. clearings may be restricted.

Alternatives 2 and 3

Direct Effects:

Minerals and energy exploration and/or development could be affected. Criteria for clearing must be met before these activities can occur within 3/4 mile of RCW colonies. While curtailment of these activities could have economic impacts, they are not likely to occur because of the small amount of clearing involved (drill sites average less than one acre) and mitigating measures included in lease contracts. Applications would be evaluated on a case by case basis at the project level through the site-specific analysis.

These alternatives could limit access to the drill sites as new road construction is excluded from colony sites under these alternatives. This impact should be minimal as access roads would be located outside the colony site in most cases.

The requests for gas exploration and/or development resulting from the Crude Oil Windfall Profit Tax of 1990 expiration date would necessitate requiring additional coordination and evaluation as discussed under alternative 1.

Indirect Effects:

Opportunities to take advantage of the tax credits that are stimulating gas exploration and/or development within 3/4 mile of RCW colonies could be foregone. Outstanding or reserved mineral rights would need to be purchased by the Federal Government in order to prevent exploration or development activities that are likely to have an adverse affect on the RCW.

Alternative 5

Direct Effects:

Clearings or access road construction for mineral exploration and/or development would not be allowed during the interim period. Exploration and/or development activities could be curtailed during this time if they could not be located further than 3/4 mile from RCW colonies resulting in economic impacts. Generally the grid system used to explore for oil and gas is flexible enough to allow location of drill pad further than 3/4 from RCW colonies. However, this may not always be the case, especially in areas like the Oakmulgee District in Alabama where an area with a high concentration of RCW colonies coincide with the likely increase in requests for gas exploration and/or development resulting from the Crude Oil Windfall Profit Tax of 1990 expiration date. Additional coordination and evaluation at the project level as discussed under alternative 1 would be necessary.

Indirect Effects:

Opportunities to take advantage of the tax credits that are stimulating gas exploration and/or development within 3/4 mile of RCW colonies could be foregone. Outstanding or reserved mineral rights would need to be purchased by the Federal Government.

Because of the limited scope of the proposal, particularly the time the interim standards and guidelines would be in effect (about 2 years), no cumulative effects are anticipated. Also, no irretrievable or irreversible commitment of resources would result by selecting any of the alternatives as interim standards and guidelines.

IV. AGENCIES AND PERSONS CONSULTED

On July 7, 1989, a letter requesting public issues and concerns regarding the proposed action of developing interim guidelines on cutting within 3/4 mile of RCW colonies was sent to the National Forests that would be affected. Forest Supervisors mailed the letter to the interested and affected publics and agencies on their Land and Resource Management Plan mailing list. Approximately 14,518 letters were mailed.

Representatives from the Sierra Club Legal Defense Fund and the Forest Service Timber Purchasers Council have been actively involved in the development of the March 27 Policy and provided input into the development of the proposed interim guidelines.

Consultation with the USDI, Fish and Wildlife Service (FWS) will be conducted per Section 7 of the Endangered Species Act on the preferred alternative. The type of consultation (formal or informal) would be determined by the findings in the biological evaluation (BE) of the selected alternative. If a "may affect" determination is found, then formal consultation will be requested. If a "not likely to adversely affect" determination is found, then concurrence (informal consultation) would be requested. Alternative 3 has been identified as the preferred alternative, therefore, concurrence with the BE finding of not likely to adversely affect would be requested. All project level actions in accordance with the interim guidelines would be covered under the Section 7 consultation for the selected alternative and would not require further consultation with FWS on the RCW. This does not eliminate the requirement to complete a project level BE to determine the effects on other proposed, endangered, threatened or sensitive (PETS) species and to determine if actions are in accordance with the interim guidelines or not. Actions not covered in the interim guidelines or not in accordance with the interim guidelines would require the appropriate consultation (based on project level BE) with the FWS.

APPENDIX A

ERRATA SHEET

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ERRATA SHEET

April 1990

This errata sheet reflects changes, clarifications and corrections made to the January 1990, Environmental Assessment for the "interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites". The public comment period and other agency review brought about these changes.

Document/Page	Content Change
RCW/EA-1	4th paragraph - 2nd to last sentence; objections changed to objectives.
RCW/EA-2	last paragraph - after colony in 3rd sentence, add as 4th sentence; However, all area within 1/2 mile of the colony would be utilized when calculating available foraging.
RCW/EA-4	4th paragraph - 2nd sentence; add Florida to list of states.
	4th paragraph - 3rd sentence; add Oklahoma to list of states.
	4th paragraph - 4th sentence; after colonies insert: and the Francis Marion; change 1343 to 2661; change 494 to 981.
	4th paragraph - 5th sentence; change 672,000 to 1,330,500; after 1,330,500 insert: potentially sultable habitat representing; then delete or; change 27 to 54.
	4th paragraph - 6th sentence; Change 76,600 to 159,660 ; change 595,400 to 1,170,840 .
	4th paragraph - Add as last sentence: These acreages are based on an average of 500 acres of potentially sultable habitat within each 3/4 mile zone.
RCW/EA-8	3rd paragraph - (Thinning)-2nd to last sentence change 60-110 to 60-100.
	Last paragraph - at the end of last sentence, add; a minimum of 10 feet.
RCW/EA-11	Top of page, add (5) longleaf pine where possible.
RCW/EA-12	1st paragraph, last sentence, add at beginning of sentence; Leave trees In existing
	Last paragraph, 1st sentence, after debris, sentence should read; a minimum of 10 feet away from the trees would occur.
RCW/EA-13	2nd paragraph - 5. Change sentence to; Level D and other Improved Forest Service roads through colony sites that are likely to have an adverse affect on the RCW would be closed.
	Add to 6. Restrictors - new sentence after limiting; After Installation, use of restrictors would require additional monitoring to ensure acceptance by the RCW.

RCW/EA-14

Top of page - g. Foraging Habitat Management - replace paragraph with; Pine and pine-hardwood forest stands 30 years of age and older within 1/2 mile of and contiguous with a colony are considered foraging habitat for the RCW. At least 6,350 pine stems equal to or greater than 10 inches DBH and a total of 8,490 square feet of pine basal area are required as foraging substrate within this area to support a colony, The number of acres required to produce this number of trees will vary depending on site and stand conditions. Normally 125 acres of well stocked (70-90 sq. ft. BA/acre) pine or pine-hardwood stands with 50% or more of the BA in pine 30 years of age or older, with 40% of this being 60 years or older, having a minimum of 24 pines 10 inches DBH or larger will provide ample foraging substrate. The actual foraging substrate equivalents, as described above, should be calculated when foraging habitat appears to be limited.

Alternative 3 - a. Thinning, add after 2; only the BA range was increased to allow for forests with higher site indices.

Last sentence on page, change 10% to 8.5%.

RCW/EA-15

6 paragraph - d. 2., change 10% to 8.5%.

10th paragraph - b.Stand Regeneration Using the Clearcut Method - (3) change more to less stem per acre.

11th paragraph - (c), change 1/4 mile to 3/4 mile

- (d), change 1/4 mile to 3/4 mile.

- (d), change 10% to 8.5%.

RCW/EA-16

c. Stand Regeneration Using the Shelterwood or Seed-tree Method, 3rd paragraph, in statement; --if possible, **drop no** from sentence.

c. section; in statement; --no regeneration if more than 10%, change 10% to 8.5%.

RCW/EA-17

Alternative 4, first sentence, change all to existing.

Alternative 4, a. Thinning; add at end of sentence; longleaf if available.

Alternative 4, b.2.; change ... is not likely to have an adverse affect on RCW habitat.

Alternative 4, c., last sentence, add to beginning of sentence; Leave trees In existing shelterwood.....

Alternative 4, d., change sentence to read; ...indicates that action would not be likely to have an adverse affect on RCW.

RCW/EA-19

Table 2 - Alt. 3 - 3. change 10% to 8.5%.

RCW/EA-21

Table 2 - Alt. 3 - 2.d. reword sentence to read; A disproportionatge age class distribution would maintain and enhance nesting potential within suitable habitat.

RCW/EA-22 Table 2 - Alt. 3 - d. change 10% to 8.5%.

RCW/EA-23 Table 2 - Alt. 3 - d. change 10% to 8.5%.

RCW/EA-31 Table 3 - Alt. 3 - change last sentence, b., 60-100 to 60-110 sq. ft.

RCW/EA-33 Table 3 - Alt. 3 - h. change 10% to 8.5%.

PCW/EA-36

Under b.- Activity, Direct Effects, replace first paragraph after first sentence with; This alternative provides recruitment habitat primarily through the designation of recruitment stands. These stands are to be a minimum of 10 acres, located 1/4 to 3/4 mile from active colony sites and at least 60 years old. In addition, 40% (50 acres) of the 125 acre foraging area is to be 60 years old or older. There is no provision for retention of relict trees, potential cavity trees or inclusions of longleaf pine within regeneration areas. These areas will generally take 30 years to provide foraging habitat and a minimum of 60 years to provide nesting habitat. Given the current decline of smaller populations such conditions would

RCW/EA-37 2nd paragraph, last sentence, insert potentially between the and sultable.

Alt. 2-4, Direct Effects - 2nd paragraph, change 10% to 8.5%.

RCW/EA-43 Alt. 1-5, Indirect Effects, replace helping with enhancing. Also add a comma (,)

after Increase.

RCW/EA-46 2nd sentence, insert **physically** between **not** and **disturb**.

Direct Effects: Air; capitalize Mid-story and replace and with with including.

likely result in the continued decline in the number of active colonies.

RCW/EA-50 2nd paragraph - delete last sentence after ...guldelines will be in effect. Add last

sentence to read; Substituting harvest aras outside the 3/4 mile zone could help

make up timber volume shortfall.

Alt. 1 and 4, Direct and Indirect Effect; first sentence, insert are expected between

consequences and to.

RCW/BE

B. Age Class----, after third sentence ...timber management practices, replace remaining paragraph with; These potential cavity trees will not begin to be

replaced until average stand age approaches 60 years and heart rot is initiated. However, potential cavity tree recruitment will probably not exceed cavity/relict tree mortality until average stand age approaches 75-100 years, the average age of start hole trees in lobiolity and longleaf pines respectively. Therefore, optimal condition for potential cavity tree recruitment will not occur for another

20 to 40 years over much of the birds range.

RCW/Appendix B

Page 2 - Delete first line -- duplicates last line on page 1.

Page 2 - Foraging Habitat - replace entire section with; Pine and pine-hardwood forest stands 30 years of age and older within 1/2 mile of and contiguous with a colony are considered foraging habitat for the RCW. At least 6,350 pine stems equal to or greater than 10 inches DBH and a total of 8,490 square feet of pine basal area are required as foraging substrate within this area to support a colony. The number of acres required to produce this number of trees will vary depending on site and stand conditions. Normally 125 acres of well stocked (70-90 sq. ft. BA/acre) pine or pine-hardwood stands with 50% or more of the BA in pine 30 years of age or older, with 40% of this being 60 years or older, having a minimum of 24 pines 10 inches DBH or larger will provide ample foraging substrate. The actual foraging substrate equivalents, as described above, should be calculated when foraging habitat appears to be limited. See USDI, Fish and Wildlife Service guidelines For Preparation of Biological Assessments and Evaluations for the Red-Cockaded Woodpecker for details.

APPENDIX B

BIOLOGICAL EVALUATION

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BIOLOGICAL EVALUATION

Interim Guidelines for Protection and Management of RCWs

January , 1990

1. INTRODUCTION

This biological evaluation (BE) could determine if the five alternatives developed as interim standards and guidelines for red-cockaded woodpecker (RCW) habitat protection and management within 3/4 mile of RCW colony sites would likely adversely affect proposed, endangered or threatened species. Recent RCW surveys indicated a decline in the number of active colonies for most of the RCW populations with less than 250 active colonies (Costa and Escano, 1989). Most of these populations are small (< 50 active colonies) and have a high risk of extirpation. The primary cause of these declines in most populations is believed to be from mid-story encroachment in the colony sites. Other factors that may be contributing to these declines are isolation and demographic problems, lack of potential cavity trees, genetic problems, cavity competition, loss of cavity trees and habitat fragmentation. The Regional Forester decided immediate action was needed to stabilize these populations as well as new long range standards and guidelines for RCW management in order to reverse this decline and progress toward achieving RCW population objectives. He issued a Policy on Cutting Within 3/4 Mile of RCW Colonies on Existing Timber Sale Contracts on March 27, 1989. This policy provided criteria for modifying existing timber sales within 3/4 mile of RCW colonies as necessary to protect RCW habitat. The Policy was an urgent and temporary action designed to maintain the environmental status quo and protect RCW habitat. In May, 1989, a Notice of Intent to prepare an Environmental Impact Statement (EIS) to amend the Regional Guide for RCW management was published. This EIS will establish long-term management direction for the RCW. In the meantime, more detailed interim standards and guidelines for habitat protection and management within 3/4 mile of RCW colonies is needed. The five alternatives described in the attached Environmental Assessment (EA) were developed in response to this need. They are limited in time to about 2 years or when the long-range standards and guidelines are established through amendment to the Regional Guide.

These guidelines apply to RCW habitat (pine and pine-hardwood) within 3/4 mile of active and inactive RCW colonies in populations with less than 250 active colonies. (see Table 1.) This involves all of the populations on National Forests in the Southern Region except the Apalachicola population in Florida, and the Vernon-Kisatchie-Evangeline population in Louisiana. The populations that will be affected by the guidelines have a total of 1,343 identified colonies of which 981 are active (see Table 1). The 3/4 mile zones associated with these colonies comprise approximately 672,000 acres or 27 percent of the 2,470,000 acres of suitable habitat available to these populations. There are 76,600 acres within the 1/4 mile zone and 595,400 acres between 1/4 and 3/4 mile (acreage figures do not include the Francis Marion NF). These guidelines would replace Forest Service Handbook 2609.23 (FSH 2609.23) in the affected populations. These guidelines are in full accordance with the RCW Chapter and expand upon it providing more detailed protection and management direction.

II. BIOLOGICAL BACKGROUND

Many species listed as proposed, endangered or threatened (PET Species) are found throughout the range of the RCW, however, only seven (including the RCW) are found within the habitat types utilized by the RCW and are expected to be impacted by these guidelines. These are: Mississippi sandhill crane (*Grus canadensis pulla*), bald eagle (*Haliaeetus I. Ieucocephalas*), red-cockaded woodpecker (*Picoides borealis*), eastern indigo snake (*Drymarchon corais couperi*), gopher tortoise (*Gopherus polyphemus*), sand skink (*Neoseps reynoldsi*) and roughleaf loosestrife (*Lysimachia asperulaefolia*).

A. RCW

Twenty RCW populations on National Forest lands in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee are affected by these guidelines. Eight of these are identified as recovery populations. The population goals and current status of these populations are shown in Table 1.

TABLE 1 - RCW COLONIES AFFECTED BY GUIDELINES

Natio	nal Forests	Population*	Nun	nber of Color	nies***
		Objective Active Colonies	Active	Inactive	Total
1	Bankhead NF (AL)	50	0	8	8
2	Bienville NF (MS)	286**	88	105	193
3	Caney RD., Kis. NF (LA)	20	0	3	3
4	Catahoula-Winn RD, Kis.NF (LA)	125	50	95	145
5	Cherokee NF (TN)	N/A	1	0	1
6	Conecuh NF (AL)	125**	16	36	52
7	Croatan NF (NC)	90**	45	28	73
8	Daniel Boone NF(KY)	50	6	18	24
9	DeSoto NF (MS)	250**	18	96	114
10	Francis Marion NF (SC)	500**	487	31	518
11	Homochitto NF (MS)	125	26	3 5	61
12	Oakmulgee Div., Tall. NF (AL)	250**	157	144	301
13	Ocala NF (FL)	138	14	42	56
14	Oconee NF (GA)	210**	1	10	11
15	Osceola NF (FL)	250**	50	52	102
16	Ouachita NF (AR)	36	16	9	25
17	Sumter NF (SC)	10	0	10	10
18	Talladega Div., Tall. NF (AL)	125**	5	156	161
19	Tuskegee NF (AL)	21	1	2	3
20	Uwharrie NF (NC)	N/A	0	2	2
	TOTAL	2661	981	880	1861

^{* -} Population objectives from FSM 2609.23

^{** -} Recovery Populations

^{*** -} Number of colonies based on colony status surveys completed during the 1989 nesting season. Francis Marion information based on 1988 population trend surveys and population estimate. Except for the Francis Marion, these are not population estimates, but represent the current information on known colonies in district records.

The RCW is endemic to the pine forests of the southern United States. It is found from Texas to the Carolinas. The species is non-migratory and clans maintain year-round territories near their nesting and roost trees. One of the more unique features of the RCW's life history is its selection of mature, living pines for cavity excavation. It is the only woodpecker species to excavate a nesting cavity in living pine trees exclusively. Most active colonies are found in open, park-like pine stands. RCW exhibit a distinct preference for living pine for foraging as well. For a more detailed description of the RCW and its ecology see the RCW Recovery Plan (USDI 1985).

The RCW was identified as a rare and endangered species in 1968 (USDI 1968), and was officially listed as endangered in 1970 (Federal Register 35:16047). With passage of the Endangered Species Act (ESA) in 1973, the RCW received federal endangered species protection. Following this listing, the Forest Service (FS) in July 1975 amended its FSH 2609.23, including a chapter (420) on management of the RCW. In 1979, under the authority of the ESA, the USDI Fish and Wildlife Service (FWS) approved a RCW Recovery Plan (USDI 1979). In October 1979, following approval of the recovery plan, the FS revised the RCW chapter of its FSH 2609.23 to include discussion of species habitat requirements and guidelines for standard management practices.

In 1985, the FWS issued an approved revision of its 1979 RCW Recovery Plan. This revision was prepared cooperatively by the FWS and FS. It identified 15 RCW populations needed for recovery, 12 of which are on National Forest. Recognizing its responsibility for contributing to the recovery of the RCW, as outlined in the revised recovery plan, the FS again revised its handbook guidelines for the RCW in March 1985. In addition to the 1980 amendment the new chapter identified individual National Forest population objectives and established detailed guidelines for nesting habitat management.

The 1985 handbook revision guided FS management of RCW until March 1989 when the Regional Forester issued a policy on cutting within 3/4 mile of RCW colonies on existing timber sale contracts. This Policy did not replace FSH 2609.23, but supplemented it to provide criteria for modifying existing timber sales within 3/4 mile of RCW colonies as necessary to protect RCW habitat. Two of the larger RCW populations, the Apalachicola in Florida and the Vernon-Kisatchie-Evangeline in Louisiana, are still being managed under the 1985 handbook guidelines.

Prior to Hurricane Hugo, the Francis Marion RCW population in South Carolina was exempt from the March 27, 1989, Policy and would not have been included under the interim standards and guidelines. This population exceeded 250 active colonies and had increased about 10 percent since 1981 (Hooper, unpub.). However, the hurricane had a catastrophic effect on the RCW population and its habitat. Therefore, any action that may affect RCW habitat within 3/4 mile of RCW colonies on the Francis Marion National Forest will now be considered under the interim standards and guidelines being evaluated in this BE.

The only statistically valid RCW population estimates are the 17 baseline survey samples completed in 1980-1982. Since that time, 100 percent checks of known colonies have been completed in most of the RCW populations, but except for the Francis Marion, population estimates have not been repeated. Table 2 shows the 1980-1982 population estimates and the number of active colonies actually known in 1986 and 1989. This information cannot be used to interpret trends, however, 5 populations have gone extinct since Foreset Service records have been kept on the RCW--2 since the baseline surveys were completed. In addition, 3 populations are on the verge of extinction with only 1 active colony known to exist. Over two-thirds of the RCW populations currently have less than 50 active colonies. These small populations have a high risk of extinction because of demography, long inter-active colony distances and small number of active colonies. Because of the lack of repeat population estimate surveys, RCW population trend interpretations are difficult. The only information available for trend analysis is the annual surveys conducted to determine the status of known colonies. A certain number of colonies are visited annually--the

number varies by year and Forest. The percent of those colonies visited that are active, plotted by year is the best data currently available from which to interpret trends.

Surveys based on visits to known colony sites only, as opposed to systematic area searches, have two opposing biases. They tend to overestimate the number of inactive colonies and, due to the tendency to select previously active colonies for survey, also overestimate the percent of active colonies in the sample. Being aware of the inherent bias associated with this type of survey at least allows a more realistic interpretation of the data. Even with allowance for the bias, survey data from 1970-86 indicate that most of the smaller RCW populations were decreasing (Costa & Escano). Analysis of the colony status check data for 1987, 1988 and 1989 has not changed these interpretations. The percent of the colonies surveyed found to be active plotted by year are shown in Figure 1 except the Cherokee, Oconee and Tuskegee populations which have inadequate data. All the populations affected by this policy except the Francis Marion and Osceola appear to be declining. The trend of the Francis Marion after Hugo is not known, but had increased about 10 percent between 1980 and 1988.

TABLE 2 - RCW POPULATION STATUS

POPULATION	1980-82 Pop. Est.	1986 No. Active	1989 No. Acitve
1. Bankhead (AL)	8	1	0
2. Bienville (MS)	85	127	88
3. Caney (LA)	N/S	0	0
4. Catahoula-Winn (LA)	110	82	50
5. Cherokee (TN)	N/S	1	1
6. Conecuh (AL)	15	32	16
7. Croatan (NC)	N/S	50	45
8. Daniel Boone (KY)	N/S	7	6
9. DeSoto (MS)	48	25	18
10. Francis Marion (SC)	427	483	487*
11. Homochitto (MS)	26	40	26
12. Oakmulgee (AL)	150	195	157
13. Ocala (FL)	38	2 2	14
14. Oconee/Hitchiti (GA)	N/S	12	11
15. Osceola (FL)	44	5 5	50
16. Ouachita (AR)	N/S	20	16
17. Sumter (SC)	0	0	0
18. Talladega (AL)	20	11	5
19. Tuskegee (AL)	N/S	0	1
20. Uwharrie (NC)	N/S	0	0

N/S - No Survey

Several factors have probably contributed to the current status and trends of RCW populations. Generally, RCW population expansion is limited by existing forest age class distribution. In many forest the majority of nesting habitat is in old-growth relict trees. Many of these old trees are being lost to natural mortality and timber management practices. If availability of suitable cavity trees from increasing stand age is not adequate to offset this loss, decreases in RCW populations are possible. Even though stand age is increasing in most forests with RCW's, increases in suitable

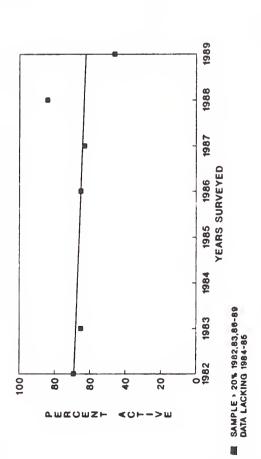
^{* -} Pre-Hugo

FIGURE 1 - RCW POPULATION TRENDS

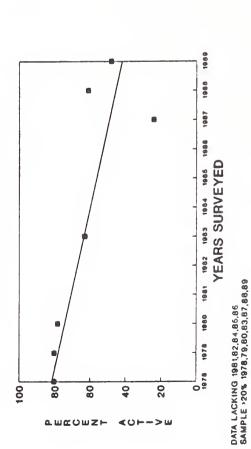
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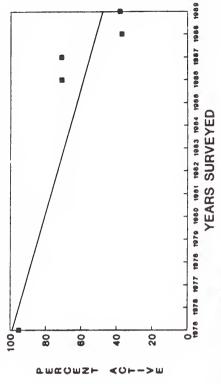
RCW POPULATION BIENVILLE



RCW POPULATION CONECUH

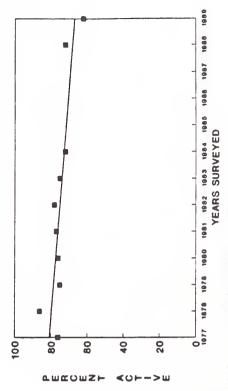


CATAHOULA-WINN RCW POPULATION



DATA LACKING 1976-1986 SAMPLE > 20% 1976,88,89

RCW POPULATION **CROATAN**



M SAMPLE - 20% 1977-61,63,84,88,89 DATA LACKING 1982,86-87

RCW POPULATION DANIEL BOONE

RCW POPULATION

100

80

0

80

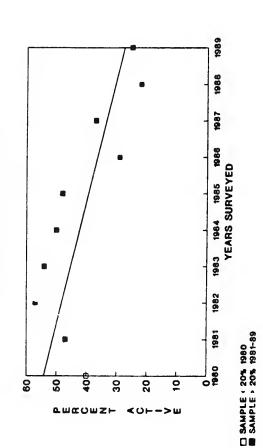
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DESOTO



RCW POPULATION OAKMULGEE

1967 1988 1969

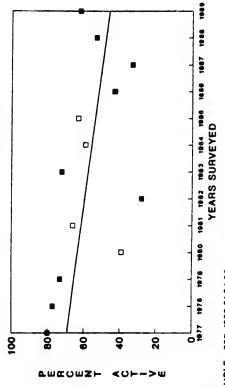
1988

1978

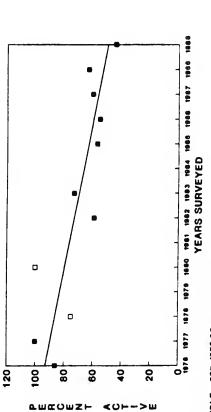
1076 1077

YEARS SURVEYED

SAMPLE - 20% 1982 SAMPLE > 20% 1976-81,63-85,87-89 DATA LACKING 1988







SAMPLE + 20% 1978.80 SAMPLE + 20% 1976,77,82,83,85-89 DATA LACKING 1979,81,84 **∢**0⊢->ш

RCW/BE--App. B - 6

RCW POPULATION

HOMOCHITTO

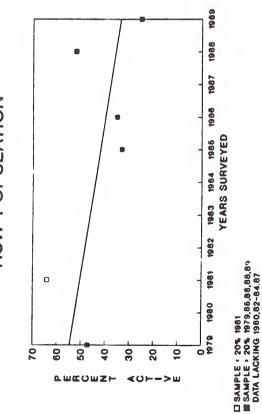
FIGURE 1 - RCW POPULATION TRENDS (cont'd)

OCALA RCW POPULATION

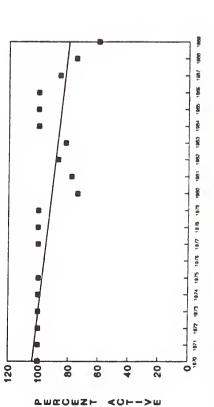
OSCEOLA RCW POPULATION

80 20 80 20

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OUACHITA RCW POPULATION



RCW POPULATION **TALLADEGA**

1000

10.00

1007

1988

YEARS SURVEYED

1003

1982

1001

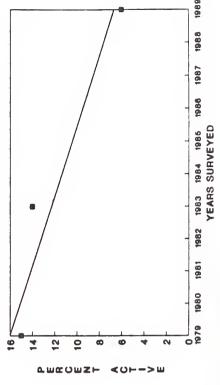
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E SAMPLE : 20% 1980-86,89
DATA LACKING 1987,88



M SAMPLE : 20% 1979,83,89
DATA LACKING 1980-82,84-88

RCW/BE--App. B - 7

DATA LACKING 1976 SAMPLE 120%

YEARS SURVEYED

nesting habitat are not likely to offset cavity mortality for at least 10 years. In over half the forest high quality potential cavity trees will not be available for another 20 to 40 years.

Rapid population declines in some RCW populations are due to hardwood mid-story encroachment. This condition in colony stands increase competition for RCW cavities by other species as well as creating a favorable environment for nest predation. Conversely, in forests with a history of prescribed burning and, therefore, no mid-story problem, healthy RCW populations are present. Slow RCW population declines on such forest can probably be attributed to natural mortality of cavity trees and the nesting habitat bottleneck previously discussed. On forests where availability of suitable cavity trees is not limiting, mid-story control should favor population increases even during the bottleneck period.

Genetic and demographic factors further compromise the health of small RCW populations. Undoubtedly, there exist a minimum population level even with acceptable habitat conditions at which populations may be lost.

Rangewide, population fragmentation continues to be a serious problem. Approximately 80 percent of the RCW populations on FS lands are more than 50 miles apart. Frequently the habitat between populations is not contiguous forested acreage and is often in private ownership. Known RCW populations in the 1970's are gone. Population fragmentation could have contributed to their decline and disappearance. These populations were small (less than 25 known colonies) and most colony sites exhibited significant hardwood encroachment. The remaining small, isolated populations exhibiting population declines are prime candidates for extirpation and therefore must be the focus for renewed conservation efforts. The majority of FS populations fit this category, with 66 percent of them having less than 50 active colonies.

B. Other PET Species

The Mississippi sandhill crane's (endangered species) range is limited to Jackson County, Mississippi, including portions of the DeSoto National Forest. The preferred habitat is semi-open and wet pine savanna. There is potential for 3/4 mile zones to extend into crane habitat.

The bald eagle (endangered species) is found throughout the southeast, however, nesting is limited primarily to peninsular Florida and to a much lesser extent the coastal areas of Louisiana, Mississippi and South Carolina. Nesting habitat is generally associated with large bodies of water. The potential does exist for 3/4 mile zones to extend to waters edge, thus encompassing active or potential eagle nesting habitat.

The eastern indigo snake (threatened species) was historically found from extreme southeastern South Carolina, the coastal plains of Georgia, throughout Florida, southern Alabama and Mississippi. Currently the species is known to occur in Florida and Georgia. A reintroduction was made on the DeSoto NF in Mississippi, however, its success or failure is unknown. This species should be given consideration on all three NF in Florida, the Conecuh in Alabama and the DeSoto. The potential for the indigo snake to occur with 3/4 mile zones definitely exist.

The gopher tortoise is listed as threatened in Louisiana, Mississippi and west of the Tombigbee and Mobile Rivers in Alabama. The only area where this species is likely to occur on NF land in conjunction with RCW's is on the DeSoto NF in Mississippi.

The sand skink (threatened species) is found in only 5 counties in central Florida. The Ocala NF is the only FS land where this species is likely to be associated with RCW's.

The roughleaf loosestrife (endangered) is the only listed plant species likely to be found in RCW habitat. It is indigenous to the sandhills and coastal plains of the Carolinas. Potential occurrence in 3/4 mile zones is limited to the Croatan NF in North Carolina.

III. PROPOSED ACTION

A. General

The proposed action is to establish interim regional standards and guidelines for RCW habitat protection and management within 3/4 mile of active and inactive RCW colonies in RCW populations with less than 250 active colonies. The interim standards and guidelines would be in effect until the analysis process is completed for the EIS supplement and Forest plans are amended to include the new RCW protection and management standards and guidelines. The scope of this proposal is limited to proposed activities that may affect RCW or its habitat within 3/4 mile of the RCW colony site.

Any action that may affect RCW habitat considered within 3/4 mile of RCW colonies will require further site-specific (project level) compliance with the National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), and Endangered Species Act (ESA) including consultation with the USDI Fish and Wildlife Service (F&WS). Compliance with any other applicable laws would be required also before any such projects or actions are carried out.

Inactive colonies and associated habitat are included in the scope of this proposal because they are needed to achieve population objectives. The inactive colony sites offer the best sites for colonization and are key for population growth. Maintenance of suitable habitat conditions across all colonies ensures that the ability to achieve population objectives are not foregone and the highest probability of capturing dispersing RCW is achieved.

The proposed action has two primary objectives:

- 1. Halt the current decline in RCW populations through maximizing the opportunity for colonization.
- 2. Provide management direction that would not foreclose future RCW management options that could be selected as long-range management strategy following the EIS process.

The alternatives were developed using elements identified in FSH 2609.23, Public input through scoping, RCW Recovery Plan, Texas Comprehensive Plan, RCW Status and Management in the Southern Region in 1986 and the FWS Biological Opinion on the Texas Comprehensive Plan.

B. Specific Guidelines

All alternatives are based on two primary management zones around active and inactive RCW colonies. The zone within 1/4 mile of the colony center is most sensitive to potential impacts such as habitat fragmentation, colony isolation and foraging habitat depletion. The zone between 1/4 and 3/4 mile from the colony center is important for future colonization (nesting habitat), population recruitment and foraging habitat. Table 3 is a brief summary of allowed and proposed management activities by alternative, which have the greatest potential to affect the RCW. For a more detailed description of what is allowed under each alternative and the required criteria, see the attached Environmental Analysis.

TABLE 3 Differences in Management Activities by Alternative

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Specific Activities	Alternative 1 Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 5 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
I. Cutting ActivitiesA. Thinning	A. Allowed in both mgmt. zones for forest mgmt. SPB risk	A. Similar to Alternative 1, but emphasizes protection of potential	A. Same as Alternativve 2.	A. Same as Alternative 2.	A. Same as Alternative 2.
	reduction and RCW habitat improvement.	nesting habitat.			
B. Regeneration Cutting 1. Clearcut	1. Allowed if ade-	l. In 1/4 mile zone:	1. Same as	l. Allowed to regene-	1. Not allowed.
	quate foraging habi- tat is maintained and colony site is not isolated from for-	Allowed to convert off-site pine to long leaf. In the 1/4-3/4 mile zone slash pine	Alternative 2.	rate understocked and damaged stands not identified as forag- ing habitat or to	
	aging habitat. Both mgmt. zones.	on wet sites and understocked and damaged stands not identified as foraging habitat are included.		convert off-site pine back to longleaf pine.	
2. Shelterwood/ Seedtree	2. Allowed under same criteria for clear-cutting (I.B.2) in both zones.	2. Not silviculturally appropriate for stand conditions where regeneration is allowed in the 1/4 mile sone Allowed.	2. Same as Alternative 2 in 1/4 mile zone. Can be considered in 1/4-3/4 mile zone if	2. Not silviculturally appropriate for stand conditions where regeneration is	2. Not allowed.
		with mitigation in the 1/4-3/4 mile zone.	habitat is unaffected.	allowed in both cones.	
ng for Othe					
1. Clearing < 10 acres.	1. Not addressed specifically, coordinated at the project level in both zones.	 Allowed if criteria under clearcutting within 1/4 mile of colony center (I.B.l.) met in 1/4 mile 	 Activity requiring the cleaering should be relocated outside 1/4 mile zone if 	l. Same as Alternative l in both zones.	1. Not allowed in either zones.
		zone. Allowed with mitigation direction in FSH 2609.23R in 1/4-3/4 mile zone.	possible. If consideration is necessary. criteria under clearcutting within 1/4		
			mile will be followed. Not to occur in oldest 1/3 of the existing suitable habitat in 1/4-3/4 mile zone.		

TABLE 3 Differences in Management Activities by Alternative

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Specific Activities	Alternative 1 Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
2. Clearings > 10 acres.	2. Not specifically addressed, coordinated at the project level in both zones.	2. Not allowed in 1/4 mi. zone. Allowed with mitigation in the 1/4-3/4 mile zone.	2. Not allowed in 1/4 mile zone. Allowed in 1/4-3/4 mile zone if oldest 1/3 of suitable habitat unaffected.	2. Same as Alternative 1 in both zones.	2. Not allowed in either zones.
II. Tree Retention Priority A/MON	II. Under all cutting methods, retention is not specifically addressed. Silvicultural guidelines apply. Relict trees and potential cavity trees not protected.	II. Under all cutting methods, some combination of the following will be retained: (1) relict trees. (2) potential cavity trees. (3) Trees > 10" DBH that are not potential cavity trees. (4) Trees < 10" DBH.	II. Same as Alternative 2.	II. Same as Alternative 2.	II. Same as Alternative 2.
III. Foraging Habitat.	III. Management objectives are tied to acres by providing pine and pine-hardwood stands totaling a min. of 125 acres which are 30 yrs. old or older, 40% (50 acs.) of which must be 60 yrs. old or older.	III. Management object- ives are tied to suitable trees by providing at least 6,350 pine stems > than 10" DBH and 8490 sq. ft. of pine BA within 1/2 mi. and conti- guious with the colony site.	III. Same as Alternative 2.	III. Same as Alternative 1.	III. Same as Alternative 2.
IV. Monitoring	IV. Annual colony checks in prescribed compartments to deter- mine status and 10 year trend survey.	IV. Annual colony checks to determine status and presence of single birds in smaller populations. 100% survey of baseline and prescribed compartments in larger populations.	IV. Same as Alternative 2.	IV. Same as Alternative 2.	IV. Same as Alternative 2.

TABLE 3 Differences in Management Activities by Alternative

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Specific Activities	Alternative 1 (No Action) Pre 3/27 Direction	Alternative 2 June 16 Proposal	Alternative 3 Modified June 16 Proposal	Alternative 4 March 27 Policy	Alternative 5 June 16 Proposal Thinning Only
V. Colony Site and Replacement/Recruitment Stand Management and	Only minor changes have been stands. Following are measure to all alternatives):		made in the management and protection of colony siets and replacement/recruitment es which ahve been added to Alternative 2 through 5 (all additions may not apply	 y siets and replacement/ igh 5 (all additions may	 recruitment not apply
Protection.	Disturbing activities such prohibited in colony sites		as motorized or heavy equipment use, log decks, ORV trails, campsites, etc. are	, ORV trails, campsites,	etc. are
	No plow lines are allowed	lowed within colony sites when burning	hen burning.		
	Existing roads which impact	impact RCW can be closed.			
	Hardwood midstory control		is expanded to include all hardwoods and a 10 acre minimum treatment area	cre minimum treatment ar	ea.
	Colony site monumentation 1/4 mile of a colony site.		must be updated before any planned habitat alteration project can occur within	ration project can occur	. within
RCW	Cavity restrictors will be to rehabilitate enlarged or		used when needed to protect cavities threatened by enlargement or when needed vities when cavities appear limiting.	d by enlargement or wher	needed
/BE	Augmentation of single male c colonies and maintenance for	le male clans with subadult ance for long-term genetic	clans with subadult females will be done to maintain viability of single male . long-term genetic diversity.	aintain viability of sir	gle male
App.	Artificial cavities will be use support of augmentation efforts	Artificial cavities will be used to supplement existing cavities when cavities are limiting especially in support of augmentation efforts.	existing cavities when cav	ities are limiting espec	ially in

IV. EVALUATION OF EFFECTS

A. General

All seven threatened or endangered species occupying habitat similar to that of the RCW in the Southern National Forests may be affected by the proposed interim standards and guidelines (Including the RCW). The RCW is the target species of the guideline, however, three other PET species; Mississippi sandhill crane, bald eagle and roughleaf loosestrife, will be positively benefited by the mitigation measures and direct habitat improvements proposed for the RCW. The remaining three species, gopher tortoise, eastern indigo snake and sand skink could potentially be negatively impacted by the proposed reductions in regeneration and concurrent reduction of early successional habitat. However, this negative impact Is expected to be off-set by the increase in thinnings, shelter-wood harvest, mid-story control and burning programs which should maintain an open stand condition conducive to the low growing herbal under-story preferred by these species.

Several factors have been identified which may be causing RCW declines in the Southern National Forests; (1) age class distribution (availability of potential cavity trees), (2) mid-story encroachment, (3) population fragmentation, (4) foraging habitat fragmentation, (5) colony isolation, and (6) genetic and demographic problems. The following is a discussion of the affects of the interim guideline alternatives on the RCW in relation to the six factors listed above.

B. Age Class Distribution (Availability of Potential Cavity Trees)

As previously discussed, probably the most limiting factor on future RCW population growth is the availability of potential cavity trees. At present, most cavity trees are relicts over 100 years of age. The current supply of such trees is limited and is declining through natural mortality and timber management practices. These potential cavity trees will not begin to be replaced until average stand age approaches 60 years and heart rot is initiated. However, potential cavity tree recruitment will probably not exceed cavity/relict tree mortality until average stand age approaches 75-100 years, the average age of start hole trees in loblolly and longleaf pines respectively. Therefore, optimal condition for potential cavity tree recruitment will not occur for another 20 to 40 years over much of the birds range.

The most significant shortcoming of Alternative 1 (current handbook direction) is its failure to provide protection for these relicts and other potential cavity trees. Given the time lag between existing stand conditions and when they reach potential cavity tree status (heart rot) it is very likely that loss of existing relicts will exceed new cavity tree formation from natural mortality alone. Preferred nesting habitat would only be available in colony sites and replacement/recruitment stands (approximately 6% of the area). Such conditions will not offer maximum opportunity for colonization that these small and declining populations will require.

Alternatives 2 through 5 not only call for protection of relicts and other potential cavity trees, but for retention of a greater percentage of each 3/4 mile zone in older age classes. For example, Alternative 2 calls for the retention of at least 50% of each 3/4 mile zone in 60 year old or older age classes. Alternative 3 retains the oldest 1/3 of suitable habitat, thus ensuring retention of all the > 100 year age classes (if available) and from 33% to 100% of the 60-90 age classes for nesting habitat. Alternatives 4 and 5 depend primarily or totally on thinning as a harvest method. Given the tree retention priorities in these alternatives, close to 100% of the older age classes should be retained for nesting habitat. This is fine for the short-term, but it should be pointed out that these alternatives applied over the long-term could have a negative effect on RCW populations because of their tendency to create a "boom and bust" situation with respect to suitable habitat.

By directing timber harvest to the dominant (younger) age classes, Alternative 2 through 5 will allow the greatest number of acres to reach optimal nesting habitat in the shortest period of time. The modification of thinnings to select for potential cavity tree characteristics and use of the "modified shelterwood" for most regeneration will produce ideal stand structure conditions which may stimulate colonization of younger stands.

C. Mid-story Encroachment

The most significant cause of RCW population decline throughout most of the Southern Region is mid-story ecnroachment in colony sites. Those small populations which have been extirpated in the past 15-20 years ususally exhibited significant hardwood encroachment in the colony sites. Alternative 1 requires the reduction of hardwood mid-story to less than 20 sq. ft. BA/ac. in the colony site with all stems > 1° diameter bring removed within 50 feet of cavity trees. Alternatives 2 through 5 call for removal of all hardwood within a 10 acre minimum treatment area with the area shaped to avoid natural hardwood areas such as streamside zones. The more aggressive mid-story removal program based on biological priorities and subsequent burning programs prescribed in Alternatives 2-5 will eliminate this as a factor causing population decline or potentially limiting population growth.

D. Population Fragmentation

With almost 80 percent of FS RCW populations more than 50 miles apart and 2/3 of these with fewer than 50 active colonies, they are prime candidates for extirpation. Much of this fragmentation is an artifact of land ownership patterns. Neither of the alternatives specifically address this problem. Any potential solutions will be long term projects and are beyond the scope of the interim guidelines. They will be discussed at length in the upcoming EIS.

E. Foraging Habitat Fragmentation

Alternative 1, which uses clearcutting as the primary harvest method, has the greatest potential to fragment foraging habitat. Assuming a 70-80 year rotation, from 38% to 42% of the suitable habitat could be unsuitable for foraging, i.e., less than 30 years old. Alternatives 2 and 3 utilize a "modified shelterwood system" for the majority of regeneration cutting. This system requires retention of 20 to 40 square feet of basal area (BA) per acre depending on the species of pine being managed. Under this harvest method, the retention of the shelter-wood for up to 10 years will reduce the non-foraging period from 30 to 20 years, therefore, potential for fragmentation is much less than Alternative 1.

Alternatives 4 and 5 depend primarily on thinning for the harvest of timber, therefore, potential for fragmentation is practically nonexistent.

F. Colony Isolation

The potential for colony isolation closely parallels that for foraging habitat fragmentation and is especially prevalent in small populations of widely scattered colonies. However, another aspect of RCW management must be considered, the potential for recruitment. This is dependent on the availability of older age class which provide suitable nesting habitat. Alternative 1 which uses 125 acres of preferred foraging area as it's basis, requires retention of 50 acres (40%) of 60+ year old pine per colony. Alternative 2 through 5 uses a 3/4 mile radius circle around each colony site as their basis. Alternative 2 calls for a minimum of 50% of the suitable habitat (250 acre average) in the 60+ age class. Alternative 3 requires that the oldest 1/3 of suitable habitat (165 acre average) be retained. Alternatives 4 and 5 should retain 50-60% of suitable habitat (250-300 acre average) in the older (60+) age classes. Alternative 2 through 5 all call for the retention of

significant percentages (33% - 60%) of older age classes. In addition, all require retention of relict trees and potential cavity trees. Potential cavity tree formation, and therefore, recruitment, is expected to significantly exceed cavity tree mortality in these alternatives. Alternative 1, with its minimal requirements for older aged stands offers the least potential for recruitment, plus the potential that cavity tree mortality may exceed cavity tree formation.

G. Genetic and Demographic Problems

The demographic and genetic isolation problems associated with highly fragmented populations are compounded by the susceptability of smaller populations (less than 50 active colonies) to extirpation. Even larger populations (50-250 active colonies), if widely scattered are susceptable to these problems. The demographic problems are immediate, whereas those of a genetic nature are long term. Until recolonization can reduce the distance between active colonies below 3 miles (demographic) and 20 miles (genetic), three short-term measures will be used to prevent continued population declines. Augmentation can ensure that colony abandonment due to lack of available dispersing females is minimized, and at the same time, eliminate or significantly decrease the potential for genetic isolation. The use of cavity restrictors and artificial cavities are also emergency measures to help bring RCW populations through the next 20 to 40 years, ensuring the presence of birds to recolonize what should be optimum habitat at that time.

Alternative 1 does not include any of these short-term measures. Alternatives 2 through 5 call for all three.

V. DETERMINATION OF EFFECT

The 5 alternatives of the proposed interim guidelines for the protection and management of RCW habitat in the Southern Region are not likely to adversely affect any of the other 6 threatened or endangered species found in RCW habitat. Alternatives 2 through 5 are not likely to adversely affect the RCW and will actually benefit it. Alternative 1 will likely adversely affect the RCW in those populations with less than 50 active colonies and may adversely affect those populations with 50-250 active colonies. Should Alternative 1 be selected, formal consultation with the USDI, Fish and Wildlife Service will be requested. If Alternative 2, 3, 4 or 5 is selected, concurrence by FWS will be requested.

VI. REFERENCES CITED

Costa, Ralph and R. Escano. 1989. Red-cockaded Woodpecker, Status and Management in the Southern Region in 1986. USDA Forest Service. Tech. Pub. R8-TP12. 71pp.

Hooper, Robert G. 1989. Unpublished Data

- U.S. Department of Agriculture, Forest Service, Southern Region. 1975.

 Wildlife habitat management handbook, chapter 420, red-cockaded woodpecker. Forest Service Handbook 2609.23R. Atlanta. (unpublished administrative document).
- U.S. Department of Agriculture, Forest Service, Southern Region. 1979.

 Wildlife habitat management handbook, chapter 420, red-cockaded woodpecker. Forest Service Handbook 2609.23R. Atlanta. (unpublished administrative document).
- U.S. Department of Agriculture, Forest Service, Southern Region. 1985.

 Wildlife habitat management handbook, chapter 420, red-cockaded woodpecker. Forest Service Handbook 2609.23R. Atlanta. (unpublished administrative document).
- U.S. Department of the Interior, Fish and Wildlife Service. 1968. Rare and endangererd fish and wildlife of the United States. U.S. Sport Fisheries and Wildlife Resource Publication 34. Washington.
- U.S. Department of the Interior, Fish and Wildlife Service. 1970. Listing of red-cockaded woodpecker as endangered. Federal Register.35:16047. October 13, 1970.
- U.S. Department of the Interior, Fish and Wildlife Service, Region 4. 1979 Red-cockaded woodpecker recovery plan. Atlanta. 38 p.

U.S. Department of the Interior, Fish and Wildlife Service, Region 4. 1985. Red-cockaded woodpecker recovery plan. Atlanta. 88 p.

JØSEPH M. DABNEY

Wildlife Biologist Southern Region

APPENDIX C

USDI FISH AND WILDLIFE SERVICE CONCURRENCE CORRESPONDENCE

Exhibit Number	Description		
C-1	Forest Service request for concurrence. January 29, 1990		
C-2	Flsh and Wildlife Service specific concerns letter, prior to concurrence. March 2, 1990 (with attachments)		
C-3	Forest Service response to Fish and Wildlife Service concerns. March 21, 1990		
C-4	Fish and Wildlife Service letter of concurrence. April 16, 1990		
C-5	Forest Service response to Fish and Wildlife Service letter of April 16, 1990.		

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United States
Department of
Agriculture

Forest Service Regional Office

1720 Peachtree Rd., NW Atlanta, Ga. 30367

Reply to: 2670

Date: January 29, 1990

Mr. James W. Pulliam, Jr., Regional Director USDI, Fish and Wildlife Service Richard B. Russell Federal Building 75 Spring Street, SW Atlanta, GA. 30303

Dear Jim:

We request your concurrence of our determination that Alternative 3 of the Environmental Assessment (EA) of Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites (Guidelines) is not likely to adversely affect the red-cockaded woodpecker (RCW).

These guidelines are the second phase of our three phase process to amend the Southern Regional guide with new long-range RCW habitat management direction. RCW habitat will be protected and managed under these guidelines until an Environmental Impact Statement is completed and the Regional Guide is amended. We will apprise you of any contemplated changes to the guidelines to ensure compliance with Section 7 of the Endangered Species Act.

A copy of the EA, which includes the biological evaluation, is enclosed. If you have any questions on the guidelines or the biological evaluation, contact Ron Escano (404 347-4084). Anything you can do to expedite this request is appreciated.

Mens

Sincerely,

JOHN E. ALCOCK

Regional Forester

Enclosure

cc: RF

FWR

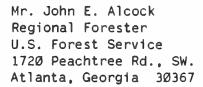


United States Department of the Interior

FISH AND WILDLIFE SERVICE 75 SPRING STREET, S.W. ATLANTA, GEORGIA 30303

March 2, 1990

MAR 7 RECTO



Dear Jack:

The Environmental Assessment of Interim Standards and Guidelines for the Protection and Management of Red-cockaded Woodpecker Habitat within 3/4-mile of Colony Sites has been reviewed, and our comments follow. A large number of incomplete or inconsistent statements were found throughout the document relating to area and habitat quality criteria necessary to support viable red-cockaded woodpecker colonies. We also have one major change regarding populations exempted from the interim standards and guidelines.

The Vernon-Kisatchie-Evangeline population in Louisiana, is exempted from the provisions in this document because it contains more than 250 active colonies. Based on recent correspondence from our Lafayette Field Office (copy enclosed), these populations should be considered separate populations and included within the scope of this management direction until, and if, proof to the contrary is available. Ongoing population viability work that indicates more than 250 active clans is needed for an effective population of 500 breeding individuals would further support the need to include this population(s) in this policy.

Specific Comments:

Page 2--The justification for the 1/4-mile zone is stated as a critical zone to provide suitable foraging habitat to sustain the colony. Since the acreage within a 1/4-mile zone is only 125 acres, and rarely will this acreage meet all the precise criteria for suitable foraging habitat (all > 30 years of age, 70-90 ft² per acre basal area [BA], all ≥ 50 percent pine, 40 percent \geq 60 years of age, \geq 24 pine trees per acre \geq 10 inches diameter at breast height [DBH]), and because the birds normally forage up to 1/2 mile from the colony site, consideration should be given to changing the 1/4-mile zone to a 1/2-mile zone. The provision for up to 10 percent of the acreage in the 1/4-mile zone to be less than 10 years old, and the likelihood of stands 11-30 years old in this same zone, make it clear that the foraging habitat within 1/4 mile will not be sufficient to maintain a colony. If the 1/4-mile zone is used, the justification in Appendix A, page 9, should be used.

Page 4--It should be made clear that the population figures exclude the Francis Marion National Forest. Also, the figure given for total colonies of 1,343 should be 1,345 according to Table 1. The acreages given in this same paragraph do not equate to the number of colonies times the acreage within a 1/4- or 3/4-mile circle. Is this because of overlapping circles, non-suitable habitat within the circles, etc.? Derivation of the acreages should be explained.

- <u>Pages 8. 12</u>--The statement regarding protecton of cavity trees through prescribed burning by raking flammable debris from the base of the tree should stipulate a minimum distance of 10 feet. A lesser distance is not effective.
- <u>Pages 9, 10, 14, 18</u>--The statements on foraging substrate equivalents are incomplete at several places in the document, because it only gives the large tree equivalent of 6,350 trees \geq 10 inches DBH and does not give the total pine equivalent of 8,490 ft² BA. Page 29 does give the total equivalents.
- Pages 9, 14, 18, 31, Appendix A-11, B-2--The statements regarding 125 acres of foraging habitat, like those on foraging substrate equivalents, are incomplete at several places in the document because they fail to include the criterion of \geq 24 pine trees per acre \geq 10 inches DBH. Also, the BA stocking for well-stocked stands varies. Page 9 says 60-90, pages 14 and 18 say 60-100, pages 18 and 31 say 60-110, and Appendix B-2 says 70 or more. The recovery plan recommendation was 60-90 and the minimum BA has since been modified to 70.
- <u>Page 13</u>--The statement regarding use of restrictors should also clarify that use of restrictors requires monitoring to ensure the acceptance of the restrictors by the birds.
- Page 14--The monitoring statements are unclear. Three habitat monitoring tasks are listed as being included in the annual colony status monitoring. These habitat monitoring tasks would seem to not be directly associated with the annual colony status monitoring. Are all sample compartments in populations greater than 100 colonies actually going to be repeated every year? This would give an annual population estimate for the population trend survey. If this is true, are populations less than 100 colonies going to have 100 percent coverage by surveys annually? How can suitable habitat not previously surveyed be surveyed annually? Once done (first year), there would not be any previously surveyed habitat left except for new acquisitions or stands just reaching suitable age.
- Pages 14-16, 22, 23, 33, 37--Several places in the document state that no more than 10 percent of the acreage within 1/4 mile will be in clearings or stands 10 years old or less. Although this proposed policy does not establish rotations because it is short-term, the intent is to preserve future options that would include rotations of 120 years. Therefore, the acreage in clearings or stands 10 years old, or less, should not exceed 8.3 percent or 1/12 of the acreage. If you want to use a round figure, use 8 or 8.5 percent.
- <u>Page 16--</u>The statement that "if possible, <u>no</u> regeneration in the predominant age class" needs to be changed to state "if possible, regeneration in the predominant age class."
- <u>Pages 18, 31</u>--The BA range for pine under alternative 3 on page 18 is listed as 60-110, yet the justification for the increase from 100 to 110 for the upper limit is not covered in the text. This needs an explanation. On page 31, the basal area range for this same alternative and alternative 5 is 60-100. Which is correct?

<u>Page 32</u>—The statement that alternative 2 provides for reestablishment and protection of longleaf and associated species ecosystems should be clarified to indicate that the protection is only that equivalent to a 120 year rotation (i.e., up to 25 percent of acreage 0-30 years old).

Page 36-The statement relating to acreage at least 60 years old that "this small amount of habitat for population growth would likely result in a continued decline in the number of active colonies" is confusing. It seemingly indicates only 10 acres in a recruitment stand would be 60 years old or older in the 1/4- to 3/4-mile zone, yet the same paragraph states that 40 percent of the foraging habitat will be 60 years old or older. Forty percent is not an insignificant acreage in these older stands.

<u>Page 37</u>--The statement in paragraph 1 that 38 percent to 42 percent of the <u>suitable</u> habitat would be non-foraging habitat should be changed by deleting the word "suitable." Non-foraging habitat is not suitable.

Page 39--The statement that it will take 33 to 44 years to provide foraging habitat and 63 to 74 years to provide nesting habitat, does not agree with the earlier statement in the paragraph that regeneration would be established in 2 to 7 years. This would indicate it would take 32 to 37 years to provide foraging habitat and 62 to 67 years to provide nesting habitat.

Appendix A-13--The statements in the third paragraph regarding cavity tree recruitment and mortality are confusing. Why would cavity tree recruitment not exceed cavity/relict mortality until average stand ages of 80-100 years? It would seem logical that the younger stands of the old age group (i.e., 60-80) would experience little mortality and, therefore, recruitment would exceed mortality. Based on what foresters have been saying, as trees get older (80+), especially in loblolly, mortality will increase significantly and may exceed recruitment. Please explain!

Appendix B-2--The foraging habitat definition needs some revision. The criterion of \geq 24 pine trees per acre \geq 10 inches DBH is associated with the acreage recommendation of 125 acres, not with the substrate equivalents which require a total of 6,350 of these larger trees. Also, the statement regarding the need to calculate substrate equivalents only lists the number of trees \geq 10 inches DBH and fails to include the total pine BA.

In addition to these technical comments, there are a couple of editorial comments for your information.

<u>Page 18</u>--Under the BA range for pine for alternative 3, the word "from" should be changed to "to" if this change in basal area remains (see earlier comments).

Appendix A-12--In the first sentence under the alternatives "sites" is misspelled and in the second sentence "have" is misspelled.

Appendix B-2--The first line is a repeat of the last line on the previous page and should be deleted.

In summary, we recommend that details be consistent throughout the subject document to avoid misleading interpretations. The most important issues are resolving whether the critical foraging zone should be a 1/4-mile or a 1/2-mile zone (Page 2) and whether the percentage of acreage to be in clearings or stands up to 10 years old should be 10 percent or 8-8.5 percent (Pages 14-16, 22, 23, 33, 37).

We presently do not concur with your determination that alternative 3 of the Environmental Assessment is not likely to adversely affect the red-cockaded woodpecker. We base this view on the two issues previously mentioned and on new information regarding population delineations on the Kisatchie National Forest in Louisiana. We will reconsider our concurrence when these issues are resolved. Your continued interest and initiative on red-cockaded woodpecker management are greatly appreciated.

Sincerely yours,

James W. Pulliam, Jr. Regional Director

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Enclosures

MAR 7 RECTO

memorandum

December 6, 1989

Assistant Field Supervisor, Fish and Wildlife Enhancement, FWS, Lafayette, Louisiana

SUBJECT

REPLY TO

Delineation of Red-cockaded Woodpecker Populations on Kisatchie National Forest

Red-cockaded Woodpecker Coordinator, Fish and Wildlife Enhancement, FWS, Asheville, North Carolina

Since October 1987, the Lafayette Field Office has assumed responsibility for Section 7 endangered species consultations. Many of our consultations are with the Forest Service and the Department of the Army (Army) concerning the effect of their activities on red-cockaded woodpeckers. Based on the Red-cockaded Woodpecker Recovery Plan and consultations prior to October 1987, we have worked with the understanding that a portion of the Kisatchie National Forest in Louisiana supports a population of red-cockaded woodpeckers greater than 250 active colonies. However, as we have become more familiar with the habitat available to red-cockaded woodpeckers in central Louisiana, we have come to believe that this is not one population but three separate populations.

Kisatchie National Forest consists of six districts in central and northern Louisiana (see enclosed map). The Vernon, Kisatchie, and Evangeline Districts are within 18 miles of each other. Therefore, the 264 active red-cockaded woodpecker colonies supported by these districts are considered to be one population. Additionally, army-owned land (Peason Ridge) adjacent to the Kisatchie District supports 17 active colonies and army-owned land (Ft. Polk) adjacent to the Vernon District supports 64 active colonies. The Army lands and Forest Service lands support a total of 345 active colonies (Table 1). Because there are over 250 active colonies, the colonies are not managed under the Forest Service's Emergency Guidelines for timber management within 3/4 mile of red-cockaded woodpecker colonies.

On the Evangeline and Vernon Districts there are 17.5 miles between the nearest active colonies and about 17 miles between suitable habitat. Those colonies are separated by two major drainages, each about two miles wide, and young (<30 years old) loblolly pine plantations.

There are eight miles between the boundaries of the Evangeline and Kisatchie districts but 14 miles between suitable habitat and 20 miles between the nearest active colonies. Most of the land between these districts has been cleared for agriculture.

Between the boundaries of the Vernon District (including Fort Polk) and the Kisatchie District (including Peason Ridge) there are about 13.5 miles and about the same distance between active colonies. These Districts are separated by two major drainages (each about two miles wide), some

agricultural land, and loblolly pine plantations. There are some tracts of suitable red-cockaded habitat on private land between these districts. Those lands were surveyed by Rich Martin of the Louisiana Natural Heritage Program. His report is attached. He found two colonies each with a single male and each within one mile of the Kisatchie District.

Because of the distances and unsuitable habitat between each of these districts there is probably little exchange of birds from one District to another. As Rich stated in his report, a bird from one District could possibly make it to another District, but the frequency of occurrence must be extremely low. The only way to assess whether exchange is occurring among the three districts would be a banding and recovery study. Until such a study is conducted, we should be conservative in our assumptions of genetic exchange and consider red-cockaded woodpeckers on each District separate populations.

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There may be significant changes in the way these Districts are managed if each District is considered a separate population. Timber management within 3/4 mile of red-cockaded woodpecker colonies would probably follow the Emergency Guidelines. Currently, there is no management for red-cockaded woodpeckers in the Kisatchie Hills Wilderness Area (on the Kisatchie District) because the woodpeckers in the wilderness area are not considered essential for maintaining a population greater than 250 colonies among these three Districts. The Forest Service will probably begin to manage for red-cockaded woodpeckers in the wilderness area if the Kisatchie District is considered a separate population. A supplemental EIS is now being prepared on the operation of the wilderness area to provide more detail on specific operations. Accordingly, the content of this EIS will change if the status of management for red-cockaded woodpeckers in the wilderness area changes.

If you agree that red-cockaded woodpeckers on each of these Districts should be considered separate populations, we will need to discuss with you the best approach for notifying the Forest Service and the effect this will have on future consultations. Please provide your comments to Kim Mitchell of this office.

David M. Smith

Table 1. Summary of red-cockaded woodpecker colonies and available habitat on three Disticts in Kisatchie National Forest in Louisiana.

District		Colonies		Acreage*
		Active	Inactive	
Vernon:	Forest Service Army	170 64	61 26	60,381 31,537
	Total	234	87	91,918
Kisatchie:	Forest Service Army	63 17	58 16	76,458 56,550
	Total	80	74	133,008
Evangeline		31	25	62,740
TOTAL		345	186	287,666

^{*}Pine and Pine/Hardwood Acreage

Survey of Potential RCW Habitat Between Vernon, Kisatchie and Evangeline Districts Kisatchie National Forest 1989

INTRODUCTION

In March, 1989, John Alcock, Regional Forester, issued a revised forest management policy for cutting within 3/4 mile of RCW colonies in "populations" with less than 250 clans. In addition to the Francis Marion and Apalachicola National Forests, these regulations exempt the Vernon, Evangeline and Kisatchie districts of Kisatchie National Forest. For the purpose of this discussion, I am also referring to the military portion of Fort Polk when I mention the "Vernon District." The Vernon, Kisatchie and Evangeline districts are considered one population because they are not separated by more than 18 miles, not because it is known that there are interactions among birds from the three districts. Taken as a unit, this population consists of about 290 active colonies; however, the number of active colonies on the Evangeline and Kisatchie (?) districts is apparently declining.

The facts that the three districts are relatively isolated, there is no evidence of RCW interaction, and the number of active colonies on the Evangeline and Kisatchie districts is declining, led me to question the validity of considering the three districts one "population." In order to gain more insight into the relationship among the districts, I initiated a survey of habitat connecting them. The underlying assumption is: if there are corridors of suitable habitat connecting the three districts, there should be no barriers to natural dispersal and exchange of genetic material. There were two primary objectives of this survey.

- 1) Determine the amount of suitable foraging and nesting habitat present between the districts.
- 2) Locate any active or inactive colonies within the above habitat and assess their status.

METHODS

Potential RCW habitat was first identified by examination of 1:65,000 scale color infra-red aerial photographs covering all land separating the three districts. Because this entire area was nearly denuded in the early 1900's, there was no chance of finding true virgin forest. Therefore, key features used to select potential habitat were, 1) high pine component, 2) relatively open forest and 3) relatively large trees. It should be noted that these criteria resulted in delineating the best potential habitat, not all suitable habitat. However, I am assuming that an absence of RCW's or suitable habitat on the identified sites indicates a similar lack of birds and habitat on the sites not identified.

Those sites that showed little or no sign of artificial regeneration were considered top priority for surveying. Given that at least 50 percent of the land area separating the three districts is either bottomland hardwood (Calcasieu River and tributaries) or intensive agriculture, potential habitat was limited. In addition, most of the remaining habitat was young, dense, artificially-regenerated pine plantation. Once potential sites

were delineated on the aerial photos, boundaries were drawn on the appropriate topographic maps. Probable ownership of each tract was determined from Louisiana DOTD 1980 Forest Landownership maps.

During May and June, 1989, I made three trips and spent a total of about 75 hours surveying the identified sites. Each site was initially examined from the perimeter then surveyed by walking transects that averaged about 1/2-mile apart. Because most of the sites were regularly burned and, therefore, relatively open, a 1/2 mile sampling intensity was deemed adequate. I concentrated on ridges and expended extra effort in the highest-quality sites, such as those with a significant number or relict longleaf. One site was not fully accessible, but appeared to be only marginal foraging habitat.

During the surveys, notes were made on stand quality (e.g., hardwood component, stand density, presence of relict trees), presence of RCW's and/or cavity trees, and the presence of potential competitors (e.g., Red-bellied and Pileated woodpeckers).

RESULTS

Of approximately 250,000 acres of land separating the three districts, I was only able to identify 10 tracts, totaling about 16,720 acres, of apparently suitable habitat (see attached list). All of those tracts were isolated from each other and only three were within three miles of Kisatchie National Forest or Fort Polk land.

The Kisatchie and Vernon districts were separated by two major branches of the Calcasieu River drainage, each about 2 miles across. Additionally, most of the pine forest has been converted to loblolly plantations, which are less than 30 years of age and have no suitable nest trees. The remainder is apparently suitable as foraging habitat (basal area <100, trees 30+ years old), but will no doubt be cut in the near future.

The above paragraph also describes the habitat separating the Vernon and Evangeline districts. There is little available habitat between the Kisatchie and Evangeline districts because most of the land has been converted to agriculture.

One site (7) was recently clearcut. Two sites (6 and 8) were only marginal foraging habitat. The remaining seven sites apparently supported good foraging habitat, some of which had scattered relict longleaf. Site 5 was the best RCW habitat that I located during this survey. It was mostly longleaf, selectively cut, regularly burned, and supported 2-4 relict longleaf per acre.

I only managed to locate two RCW colonies, both apparently only supporting a single male. Both of those colonies were on site 5, which is about 1 mile from the Kisatchie District. One of the "colonies" consisted of two cavity trees and the other consisted of only one cavity tree.

DISCUSSION

Examination of aerial photographs from the early 1900's provides a startling picture of the appearance of the once extensive southwest Louisiana longleaf pine region. Much of the land area was completely denuded as late as the early 1940's, with the exception of a few scattered trees or clumps of trees. Those remnants apparently provided enough habitat to support a greatly-reduced RCW population, which provided the source for the birds currently present. The relict trees left from the initial cutting apparently provide the critical element of the colony sites.

Once fire and free-ranging livestock were controlled, much of the cutover land was eventually reforested through natural regeneration of longleaf or artificial planting of slash and loblolly (?) pine. Unfortunately, modern forest management generally dictates short rotations and provides little consideration for the preservation of natural longleaf pine forest. Thus, most of the second growth forest, which had the potential to be restored to suitable RCW habitat, is now rendered unsuitable.

Today, RCW's have been extirpated from most of the land between the Vernon, Kisatchie and Evangeline districts and only a small portion of the area is even suitable as foraging habitat. However, it is still theoretically possible for an occasional RCW to pass between the Vernon and Kisatchie or Vernon and Evangeline districts. Whether or not those birds will become incorporated into a clan is a separate question. Interaction between birds in the Kisatchie and Evangeline districts is highly unlikely because of the large amount of agriculture between those districts and all of the existing pine forest is highly fragmented and intensively managed.

Giver the remote probability of a female RCW from one district becoming incorporated into a clan in another district, and that the number of active colonies on the Evangeline and possibly on the Kisatchie are declining, I do not feel that the three districts should be considered together from a management perspective. The Vernon Districts is certainly high-quality RCW habitat, the same is not true for the Kisatchie and Evangeline districts. Previous management has obviously not been successful in stemming the decline of RCW's on the Kisatchie and Evangeline and additional steps must be taken to reverse the trend. I am not sure that the revised management guidelines are the best that can be developed for RCW's (because of the small amount of longleaf on the Evangeline), but those two districts cannot rest on the laurels of the Vernon District while they continue to loose clans.

Richard Martin
13 October 1989

Summary of potential Red-cockade Woodpecker habitat between Vernon, Kisatchie and Evangeline districts, May-June 1989.

Site	Location	Size	Longleaf Component ^a	Hardwood Component	Summary
1	T4N-R8W, Sec. 8 (part)	200	High	Low	Good foraging, no relicts
2	T4N-R7W, Sect's 1,2,3, 4,9,10,11,12	5120	Low	Moderate	Good foraging, few relicts
3	T4N-R7W, Sect's 21,22,23	1920	Low	Moderate	Good foraging, few relicts
4	T4N-R7W, Sect's 33,34, 35,36 T3N-R7W, Sect's N1,N2, 3,4,NW9	4640	Low	Moderate	Good foraging, no relicts
5	T4N-R6W, Sect's S5,SE6, E7,NW16,NE17	1760	High	Low	Good nesting, very good foraging, numerous relicts
5	T4N-R6W, Sect's 29,NE30	800	Low	High	Poor foraging, no relicts
7	T3N-R6W, Sect's S29,30 T3N-R7W, Sec. E25	1160	N/A	N/A	Recently clearcut
8	T3N-R5W, Sec. 16	640	Low	High	Poor foraging, no relicts
9	T2N-R5W, Sect's SW3,NW10	320	Moderate	Low	Good foraging, no relicts
10	T1N-R5W, Sec. SW23	160	High	Low	Good foraging, no relicts

For both Longleaf and Hardwood component the following definitions apply: High=>50%, Moderate=25%-49%, Low=<25% of total stems.



United States Department of Agriculture

Forest Service Regional Office

1720 Peachtree Rd., NM Atlanta, Ga. 30367

Reply to: 2670

Date: March 21, 1990

Mr. James W. Pulliam Regional Director U.S. Fish and Wildlife Service 75 Spring St. SW Atlanta, GA 30303

Dear Jim:

In response to your March 2, 1990, letter of non-concurrence on Alternative 3 of the Environmental Assessment (EA) for Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites (Guidelines), we've made changes or added clarification to the EA based on your recommendations. We will address the inclusion of the Vernon-Kisatchie-Evangeline RCW population in Louisiana in a supplement to the EA.

Procedurally, we cannot include the Vernon-Kisatchie-Evangeline area in this EA and Decision Notice. Because the scope of analysis in the EA did not include the Vernon-Kisatchie-Evangeline population, the environmental consequences of implementing the alternatives considered as interim standards and guidelines in this area were not assessed. We have, however, begun work on a supplement to the EA which will disclose the environmental consequences of including this population under the Interim Standards and Guidelines. We will prepare a biological evaluation for this action and again consult with your agency regarding the supplement.

The other two major concerns you had were addressed as follows:

The inference on page 2 that only the area within 1/4 mile of each colony is suitable for foraging was unintentional. We meant to imply that the 1/4 mile zone, being nearest the colony site, was considered the most critical foraging area. The definition of foraging habitat in the EA's glossary (page 8-2) gives the complete definition. The wording on page 2 of the EA has been changed for clarification.

Your other major concern regarding the allowed percentage of area less than 10 years old has been addressed by reducing the percentage from 10% to 8.5% per your recommendation.





Mr. James W. Pulliam

page 2

Other concerns you had revolved around variations in the definition of foraging habitat throughout the EA. The primary reason for this was an attempt at brevity, as the complete definition is quite lengthy. We are modifying the EA to ensure that the correct definition is used in all critical areas, i.e., the preferred alternative, glossary, etc. There may be a few places where brief or incomplete definitions still occur.

The remainder of your concerns and editorial comments will be handled through direct changes in the EA.

We have made another minor modification to Alternative 3 based on public and agency input. This change involves the minimum leave basal area (BA) in longleaf seedtree/shelterwood regeneration areas. The BA has been changed from a minimum of 40 sq. ft./ac. to a range of 25-40 sq. ft./ac. This change was made in response to new information which indicates that BA's this high severely impede establishment and development of the new stand. Since the only justification to regenerate longleaf during the interim period is to improve the age class distribution and provide long-term benefit to the RCW, it was decided to forego the higher leave BA to allow the site-specific manager a range to fit the regeneration method to the site as long as the existing RCW's are not adversely affected.

Based on the above changes in the EA and our procedure for handling the Kisatchie population, we again request your concurrence of our determination that Alternative 3, as modified, of the EA is not likely to affect the RCW. This concurrence will, of course, affect only those populations within the scope of the current document. We will be contacting you again in the near future for concurrence on the supplement covering the inclusion of the Kisatchie population under interimquidelines.

If you have any questions, contact Ron Escano (404/347-4084) or Dave Smith (404/347-4338). Anything you can do to expedite this request will be appreciated.

Sincerely

JOHN E. APCOCK

Regional Forester

CC: RF Director, FWR RCW EIS Team Leader cc: Vickie Breman Ron Escano Jean Kruglewicz

Gary Henry, USDI - Asheville, NC Augie Valido - Atlanta, GA





United States Department of the Interior

FISH AND WILDLIFE SERVICE 75 SPRING STREET, S.W. ATLANTA, GEORGIA 30303



April 16, 1990

APR 1 8 1990

Mr. John E. Alcock Regional Forester U.S. Forest Service 1720 Peachtree Rd., NW. Atlanta, Georgia 30367

Dear Mr. Alcock:

We are in receipt of your March 21, 1990, letter addressing our concerns on Alternative 3 of the Environmental Assessment for Interim Standards and Guidelines for the Protection and Management of Red-cockaded Woodpecker Habitat Within 3/4 Mile of Colony Sites (Guidelines). We are satisfied with your response and can now concur with your determination that Alternative 3 of the Environmental Assessment is not likely to adversely affect the red-cockaded woodpecker outside of Kisatchie National Forest. We await your supplement to the Environmental Assessment that will address effects on the red-cockaded woodpecker in the Vernon, Kisatchie, and Evangeline Districts as separate populations.

On a related matter, we would like to express concern regarding the period allowed for seed-tree stand regeneration to occur before artificial planting methods are undertaken. We understand that the U.S. Forest Service is mandated to ensure regeneration within 5 years of cutting. Good seed crops in longleaf pine generally occur at intervals greater than 5 years; therefore, this time period may not be adequate to allow for natural regeneration to take place. Because of mandated constraints, we believe that it would be prudent to synchronize seed-tree regeneration cuts with good seed crops. Another alternative would be initiation of legislative changes to provide the needed flexibility by lengthening the evaluation period for adequate regeneration long enough to ensure that at least one good seed year has transpired. Artificial planting methods are expensive and highly disruptive to the terrain and to herbaceous understory vegetation that is a vital part of the longleaf fire-dependent ecosystem. Closer attention to cutting schedules corresponding with potentially good seed crops should allow for greater success in natural seed regeneration. Your response to this concern would be appreciated.

We believe that the Guidelines are a significant improvement in management of red-cockaded woodpeckers and commend you and your staff in their development and implementation. We look forward to working with you as you continue to develop your new long-range red-cockaded woodpecker habitat management direction.

Sincerely yours,

Phillip S. Morgan

Acting Regional Director



United States Department of Agriculture Forest Service Regional Office

1720 Peachtree Rd., NW Atlanta, Ga. 30367

Reply to: 2670

Date: April 24, 1990

Mr. James W. Pulliam, Jr., Regional Director USDI, Fish and Wildlife Service 75 Spring St., SW, Suite 1276 Atlanta, GA 30303

Dear Jim:

Thank you for your letter of April 16, 1990, concurring with our determination that Alternative 3 of the Environmental Assessment for Interim Standards and Guidelines for the Protection and Management of Red-cockaded Woodpecker Habitat Within 3/4 Mile of Colony Sites is not likely to adversely affect the RCW.

In response to your concern regarding the period of time allowed for natural regeneration to occur before planting of seedlings, I offer the following: the regulations implementing the National Forest Management Act of 1976, state that prior to harvesting a stand of timber, the technology or knowledge must be available to reasonably ensure the establishment of a well stocked stand within five years of the <u>final harvest cut</u>. I emphasize the final harvest cut because in the situations to which you refer, seed-tree and shelterwood harvest methods, removal of the seed-trees is considered the final harvest cut. Since these trees are not removed until the new stand is adequately established, the five year restriction has no bearing. If necessary, the residual trees could be left ten or twenty years, a practice which many RCW experts consider beneficial to the bird. The leaving of seed-trees for extended periods will be considered in our up-coming Environmental Impact Statement.

The synchronization of seed-tree regeneration cuts with predicted good seed crops can be successful. However, this is not easily done given the logistics of our timber sale planning process. Most sales are planned three years in advance so reliable budget request can be submitted to Congress. This makes it difficult to hold any significant amount of seed-tree cutting so that we can synchronize harvests with good seed crops. Because the five year restriction on reforestation is not a factor when doing seed-tree/shelterwood regeneration, timing of harvest with seed crops is not as critical.







Mr. James W. Pulliam, Jr.

I agree that current site preparation methods for artificial regeneration are highly disruptive to the herbaceous understory associated with the longleaf fire dependent ecosystem. I also agree that natural regeneration of longleaf is preferable on sites where that species currently exist. However, on sites being converted to long leaf, planting is our only recourse. Hopefully, the use of containerized seedlings, although more expensive, can greatly reduce the degree of site preparation needed to ensure an adequate stand.

If you should have additional questions concerning these matters, feel free to contact me any time.

Sincerely,

JOHN E. ALCOCK

Regional Forester

cc: Regional Forester Director, FWR

RCW EIS Team Leader



APPENDIX D

FOREST LAND AND RESOURCE MANAGEMENT PLAN AMENDMENTS

Page No.	Description
Appendix D-1	National Forests in Alabama
Appendix D-3	Chattahoochee/Oconee National Forests
Appendix D-5	Cherokee National Forest
Appendix D-7	Daniel Boone National Forest
Appendix D-9	National Forests in Florida
Appendix D-11	Francis Marion National Forest
Appendix D-13	Kisatchie National Forest
Appendix D-16	National Forests in Mississippi
Appendix D-18	National Forests in North Carolina (Croatan & Uwharrie)
Appendix D-20	Ouachita National Forest
Appendix D-22	Sumter National Forest



National Forests in Alabama

Land and Resource Management Plan

Amendment No. 6

May 1990

This amendment adds the following language to the Forest Plan at page IV 84: Follow the direction in FSH 2609.23R, Chapter 420 as incorporated (by reference) herein and supplemented by the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990. These interim standards and guidelines supplement the direction to the RCW protection and management standards and guidelines of this plan with the following exceptions:

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Chapter IV - Forest-wide Management Requirements, page IV-8 as item 4(d) under Wildlife - Standards and Guidelines.

Chapter IV - Objectives - page IV-28, add the following wording to the first paragraph under the heading "Fish and Wildlife":

Within 3/4 mile of red-cockaded woodpecker colonies, rotations of 120 years is the objective for pine and pine-hardwood stands.

Chapter IV - Management Area No. 6 - page IV-73, Standards and Guidelines numbers 23, 24 and 25.

Chapter IV - Management Area No.16 - page IV-109, Standards and Guidelines numbers 13, 14, and 15.

(Note: Interim Standards and Guidelines for Red Cockaded Woodpecker colony sites will rule in those areas that may conflict with Standards and Guidelines developed for other resource management activities.)

This amendment is not a significant change in the National Forests in Alabama Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards

and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

- a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.
- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places where timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Chattahoochee/Oconee National Forests Land and Resource Management Plan

Amendment No. 13

May 1990

This amendment adds the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.
- 4. The Forest-wide standards and guidelines as they apply to Management Area No. 3, Hitchiti Experimental Forest, have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter 4, Forest-wide Standards and Guidelines, page 4-20, Wildlife and Fisheries, Threatened, Endangered, and Sensitive Species:

After last item add ~8. Add the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented. ~
- 4. The Forest-wide standards and guidelines as they apply to Management Area No. 3, Hitchiti Experimental Forest, have not been supplemented.

Chapter 4, Management Area 17, page 4-104, Wildlife and Fisheries, Wildlife Habitat

Item 3, add the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented. ~
- 4. The Forest-wide standards and guldelines as they apply to Management Area No. 3, Hitchiti Experimental Forest, have not been supplemented.

This amendment is not a significant change in the Chattahoochee/Oconee Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

- a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.
- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Cherokee National Forest

Land and Resource Management Plan

Amendment No. 11

May 1990

This amendment provides supplemental Standards and Guidelines for the management of the red cockaded woodpecker (RCW) to those which are found in FSH 2609.23R, Chpt. 420. These supplemental standards and guidelines are found in the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - Forest-wide Management Requirements

Page IV-21

Under Habitat Non-Structural/Structural Improvement Maintenance and the first General Direction statement add a fourth Standard and Guideline: Follow direction in the FSH 2609.23R, Chpt. 420 as incorporated by reference herein and supplemented by the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

This amendment is not a significant change in the Cherokee Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 Ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the

new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Daniel Boone National Forest

Land and Resource Management Plan

Amendment No. 5

May 1990

This amendment adds the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - Forest Management Direction, page IV-11, Forest-wide Prescription Requirements, Standards and Guidelines.

This amendment is not a significant change in the Daniel Boone National Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

- a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.
- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just

a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.

- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

National Forests in Florida

Land and Resource Management Plan

Amendment No. 4

May 1990

This amendment adds the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - B. Forestwide Standards and Guidelines
2. Forestwide Management Practices - Standards and Guidelines
Page IV-10, Wildlife, Paragraph A.
Page IV-13, Timber, Paragraph H.

Chapter IV - E. Management Prescriptions

2. Management Areas and Management Area Standards & Guidelines Management Area 5

Page IV-111, Wildlife, Paragraph A.

This amendment is not a significant change in the National Forests in Florida Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the

new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Francis Marion National Forest

Land and Resource Management Plan

Amendment No. 6

May 1990

This amendment adds the following language to Chapter IV, Forest Management Direction, page IV-2: Follow the Wildlife Habitat Management Handbook for RCW management (FSH 2609.23R, Chapter 420) as incorporated by reference herein, and supplemented by the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990. These interim standards and guidelines supplement direction to the RCW protection and management standards and guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - Forest Management Direction, page IV-2 Wildlife - Standards and Guidelines.

Chapter IV - Management Area 9 - RCW Colonies, page IV-76.

This amendment is not a significant change in the Francis Marion Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and

guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Kisatchie National Forest

Land and Resource Management Plan

Amendment No. 7

May 1990

This amendment adds the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter III - Forest-wide Management Requirements

Under General Direction, replace the first sentence of the paragraph that begins "Protect the threatened...", with the following:

Protect the threatened and endangered red-cockaded woodpecker and maintain or improve its habitat in accordance with Chapter 400 of the Wildlife Management Handbook (R8 FSH 3/85 Amendment), as supplemented by the May 1990 Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites.

Page III-19

Page III-18

Under Standards and Guidelines, after the sentence "Provide suitable...stands.", insert the following as the beginning of a new paragraph:

For RCW populations with 250 active colonies or greater:

Page III-19

Under Standards and Guidelines, after the paragraph ending "... Wildlife Management Handbook.", and before the paragraph beginning "If a compartment...", insert the following as a separate paragraph:

For RCW populations with less than 250 active colonies: Provide for suitable foraging habitat as specified in the May 1990 Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites (see Management Area #19 prescription).

Chapter III - Prescription for Management Area #19 - Red-Cockaded Woodpecker Colonies and Recruitment Stands

Page III-176

Insert the following sentence within the table, before the "RECREATION" heading:

The following Management Practices/Activities, General Direction, and Standards and Guidelines apply to RCW populations with 250 or more active colonies:

Page III-182

Add the following to the end of the table:

For RCW populations with less than 250 active colonies, RCW habitat protection and management within 3/4 mile of active and inactive colonies will be in accordance with Chapter 400 of the Wildlife Management Handbook (R8 FSH 3/85 Amendment) as supplemented by the May 1990 Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites.

This amendment is not a significant change in the Kisatchie National Forest Final Land and Resource Management Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

- a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.
- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of

the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.

d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

National Forests In Mississippi

Land and Resource Management Plan

Amendment No. 8

May 1990

This amendment adds the Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Record of Decision - RCW rotations, Page 3.

Chapter IV Forest Wide Standards and Guidelines, Page 4-7.

Prescriptions for Analysis Areas Not Suitable For Timber Production, Pages

4-95, 4-96, Special Use Permits.

Appendix I Compartments Affected By RCW, Pages I-1, I-2.

This amendment is not a significant change in the National Forests in Mississippi Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Croatan & Uwharrie National Forest

Land and Resource Management Plan

Amendment No. 5

May 1990

This amendment adds the following language to Chapter III - Forest Management Direction, page III-8, Wildlife and Fish, General Direction (Croatan): Follow the RCW Chapter of the Wildlife Habitat Management Handbook (FSH 2609.23R, Chapter 420) as incorporated by reference herein, and supplemented by the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990. These interim standards and guidelines supplement the direction in the RCW Protection and Management Directions and Standards of this plan with the following exceptions:

- The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter III - Forest Management Direction, page III-8, Wildlife and Fish-General Direction.(Croatan).

Chapter III - Management Area 2 I - Wildlife and Fish, General Direction, page III-24.

This amendment is not a significant change in the Croatan and Uwharrie Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and

guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Ouachita National Forest

Land and Resource Management Plan

Amendment No. 5

May 1990

This amendment adds the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990, as supplemental direction to the RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - Forest-wide Standards and Guldelines. page IV-13.

CT Threatenend, Endangered and Sensitive Species.

CT 1 T&E Species Operations.

Chapter IV - Management Area 1. Page IV-89-90. General -Southern Pine Beetle (SPB).

Chapter IV Management Area #6. Page IV-108.

CT Threatened and Endangered (T&E) Species Resource Activities.

CT 1 T&E Operations - Red-Cockaded Woodpecker

This amendment is not a significant change in the Ouachita Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

- a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.
- b. Location and Size. The location and size of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

Sumter National Forest

Land and Resource Management Plan

Amendment No. 8

May 1990

This amendment adds the following language to Chapter IV - Forest Management Direction, page IV-2, Wildlife Standards and Guidelines: Follow the RCW Chapter of the Wildlife Habitat Management Handbook (FSH 2609.23R, Chapter 420) as incorporated by reference herein, and supplemented by the *Interim Standards and Guidelines for the Protection and Management of RCW Habitat Within 3/4 Mile of Colony Sites* as described in the Decision Notice of May 1990. The Interim Standards and Guidelines supplement the direction for RCW Protection and Management Standards and Guidelines of this plan with the following exceptions:

- 1. The guidelines for cutting within colony sites have not been supplemented.
- 2. The guidelines for cavity tree cutting have not been supplemented.
- 3. The guidelines for SPB suppression have not been supplemented.

Supplement the Forest Plan with the Interim Standards and Guidelines as follows:

Chapter IV - Forest Management Direction, page IV-3 Wildlife - Standards and Guidelines.

Chapter IV - Management Area 8 - RCW Colonies and Foraging Areas, page IV-43.

This amendment is not a significant change in the Sumter Forest Plan. The determination that this is a non-significant amendment is made in accordance with 36 CFR 219.10(f) and the Forest Service Manual Chapter 1920 (53 Fed. Reg. 26807, July 15, 1988) and the Forest Service Handbook 1909.12 ch. 5.32 (53 Fed Reg. 26836, July 15, 1988). Due to the temporary nature of these interim standards and guidelines, this amendment does not significantly alter the multiple use goals and objectives for long-term land and resource management, (FSM 1922.51.) Nor does it significantly alter the long-term relationship between levels of multiple-use goods and services originally projected. (FSM 1922.52 1.) This amendment simply adds more direction and standards and guidelines for managing the endangered RCW to that already contemplated in the Forest Plan until more long-term management direction is approved. The amendment does not involve an increase or decrease in resource demands.

The Forest Service Handbook (FSH 1909 at 5.32 a-d) provided the following factors which were used to determine that this amendment is not significant:

a. Timing. As discussed above this is a short-term change in standards and guidelines for RCW management for this Forest Plan that has already been in effect for several years. The amendment will remain in place only until long-term management direction is implemented. It is expected that the new direction will be ready for implementation in approximately two years. These standards and guidelines will not be kept in place for the remainder of the planning period, and therefore the timing of the amendment does not make it significant for the current plan.

- b. Location and SIze. The location and sIze of the area involved in the change is small. The areas within 3/4 mile of RCW colonies that will be affected by these standards and guidelines are on just a part of the total forest area. Further, only a fraction of these acres within 3/4 mile of RCW colonies will actually be subject to regeneration timber cutting within the short period that these interim guidelines will be in effect.
- c. Goals, Objectives, and Outputs. The change in standards and guidelines will not alter the long-term relationship between the levels of goods and services projected by the forest plan. Even if the standards and guidelines might result in a change in timber outputs during the life of these standards and guidelines, it is not possible at this time to predict whether any such changes would forego the opportunity to achieve an output in later years. Timber that might not be harvested now because of the interim standards and guidelines would still be available in the future, when long-term management direction is in place. Further, timber outside the 3/4 mile areas may make up for sales that would have otherwise occurred within these areas. Furthermore, the emphasis on thinning may provide additional volume.
- d. Management Prescription. This amendment does not change the desired future condition for the land and resources from that contemplated by the management for recovery of the RCW that is already in the Forest Plan. This amendment only adds to and clarifies standards and guidelines for RCW management that are already contained in this Forest Plan. It does not affect the whole planning area, but only those places were timber harvesting is contemplated within 3/4 mile of an RCW colony during the short period that this amendment will be in effect.

APPENDIX E

GLOSSARY



GLOSSARY

ABANDONED COLONY - A colony site determined to be abandoned because of inactivity over an extended period of time. No colonies will be declared abandoned under the interim policy.

ACTIVE COLONY - It denotes that a specific colony is occupied in a given survey year. A colony is determined to be active when there are nesting or roosting red-cockaded woodpeckers present, or when one or more cavity trees exhibit fresh pitch wells and resin flow, reddish under-bark appearance and/or fresh chipping of cavity entrance or plate. It is synonymous with clan in recovery goal attainment reports and population monitoring.

AUGMENTATION - The translocation of RCW's from one clan to another to maintain clan viability or improve genetic diversity. Current techniques limit translocation of sub-adult female RCW's into single male clans to minimize the change of colony abandonment and help bolster the population.

BASAL AREA - This is the cross-sectional area at DBH of any tree tallied at a sample point. Basal area is separated by products, i.e., poletimber and sawtimber, and by species groups, i.e., pine or hardwood. In the south, the USDA Forest Service, Region 8, uses a 10 basal area factor prism and each tallied tree represents 10 square feet of basal area per acre.

CAVITY TREE - The tree that contains a red-cockaded woodpecker cavity or start hole. Frequently, nest competitors will enlarge a RCW cavity. Enlarged RCW cavities will still be considered RCW cavities for inventory and management purposes.

CLAN - A breeding pair of red-cockaded woodpeckers plus helpers living as a family group. Clan size can vary from just a mated pair to as large as nine individuals, but averages about three birds. Occasionally, clan size may be reduced to a single individual (usually a male). This is usually a temporary phenomenon with either successful mating or colony abandonment occurring in a short period of time.

CLEARCUTTING - A cutting method in the evenaged silvicultural system, employing one operation entry, in which all trees in an area are cut for the purpose of creating a new, even-aged stand. The area harvested may be a patch, stand or strip large enough to be mapped or recorded as a separate age class.

COLONY OR COLONY SITE - A site in which a clan of red-cockaded woodpeckers nest or roost. It includes the aggregate of cavity trees plus at least a 200-foot zone around them. The cavity trees used by a clan tend be clustered and in most cases are clumped with an area that can be encompassed by a circle 1,500 feet in diameter.

CORRIDOR OR HABITAT LINKAGE - Corridors or habitat linkages to maintain continuity of RCW habitat between colonies are contiguous stands of pine or pine-hardwood at least 30 years of age. The actual stands serving as a habitat linkage can vary through time. Corridors should link individual colonies up to 3 miles apart. Additionally, groups of 5 or more linked colonies should be linked if the closest colonies are less than 20 miles apart. All distances should be measured from the colony centers. When corridors between colony sites or groups of 5 or more colonies can not be maintained because of private land, water bodies, etc., serve as barriers to RCW movement, a reasonable effort should be made to establish the corridors along tracts of National Forest, other public or private lands

with a suitable easement that is the most direct and least interrupted linkage. Future acquisition of private land or their consolidation actions should focus on completing corridors.

DAMAGED STAND - Includes trees that have sustained considerable damage from wind, fire, insects, disease or other destructive agents in which the undamaged trees consist of less than the basal area per acre shown in the following table.

Total Height	eight Minimum Basal Are		
36-65	30		
66-95	40		
96+	50		

DBH - Diameter at Breast Height; The most frequent measurement made by foresters. This is defined as the tree stem diameter, outside the bark at a point 4.5 feet above the ground.

DESTROYED COLONY - A colony site in which the cavity trees no longer exist or have died. A colony will not be declared destroyed until a follow-up survey during a subsequent nesting season is completed to confirm the lack of new cavity trees within 1,500 feet of the colony. A destroyed colony is not managed as a colony site.

ESSENTIAL WILDERNESS COLONY - Those RCW colonies in Wilderness identified in the SPB FEIS and USDI, Fish and Wildlife Service Biological Opinion dated December 12, 1986 as essential for the recovery of the species.

EXTIRPATION - A species being removed from a geographical portion of its original range, the species still exists, but its range is now much smaller. An example would be the Mountain Lion, it once occurred throughout the Eastern United States, but due to human pressure, now only occurs in remote areas of the Western United States.

FORAGING HABITAT - Pine and pine-hardwood forest stands 30 years of age and older within 1/2 mile of a colony are considered foraging habitat for the RCW. At least 6,350 pine stems equal to or greater than 10 inches DBH and 8,490 square feet of pine basal area are required as foraging substrate within this area to support a colony. The number of acres required to produce this number of trees will vary depending on site and stand conditions. Normally 125 acres of well stocked (70-90 sq. ft. BA/acre) pine or pine-hardwood stands with 50% or more of the BA in pine 30 years of age or older, with 40% of this being 60 years or older, having a minimum of 24 pines 10 inches DBH or larger will provide ample foraging substrate. The actual foraging substrate equivalents, as described above, should be calculated when foraging habitat appears to be limited. See USDI, Fish and Wildlife Service Guidelines For Preparation of Biological Assessments and Evaluations for the Red-Cockaded Woodpecker for details.

FRAGMENTATION - This refers to the suitable habitat of a RCW. It is the scattering or isolating of habitat required by the RCW to forage.

HABITAT - The physical and biological environment of a plant or animal where all essentials for its development and existence are present.

INACTIVE COLONY - A colony site is determined to be inactive when there are no red-cockaded woodpeckers present and when none of the cavity trees exhibit active resin wells. Active resin wells are noted by recent pecking and clear, fresh resin flowing from the well, reddish under-bark appearance or fresh chipping of cavity entrance or plate. Inactive status denotes that a specific colony is unoccupied in a given year.

INVALID COLONY - A stand misidentified as an RCW colony site. Often, especially older survey information, trees with pileated feeding holes or sapsucker feeding holes are misidentified as RCW cavity trees. If such a misidentification is confirmed by a biologist, the colony is to be deleted from the colony inventory and not managed as a colony site.

LONGLEAF SITE - South Atlantic and Gulf Coastal plains from sea level up to 1,900 feet in the Appalachian Mountains of Alabama. Longleaf grows best on deep, well-drained acid sandy soils. In summer, these areas are usually very dry and trees such as blackjack, turkey oak and bluejack are scattered under the longleaf. Pure, open stands are typical in the Gulf Coastal Plain while further North, stands with loblolly pine and upland hardwoods are common associates (see 'suitable habitat').

MID-STORY - A middle canopy layer of smaller trees that occur under an overstory of trees. These 'mid-story' trees are usually of a different species than the large trees and can grow in almost total shade. Some trees in this category include dogwood, red maple, sourwood, holly, some hickories, oaks and gums. Usually these trees never develop into large, dominant forest trees.

OLD GROWTH - Old-growth forests are ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function.

PINE STAND - A stand in which 70 percent or more of the basal area of the dominant and co-dominant position are softwood species (see 'Stand').

PINE-HARDWOOD STAND - Stands in which 51 to 69 percent of the basal area of the dominant or co-dominant position are softwood species (see 'Stand').

POTENTIAL CAVITY TREE - A pine tree which currently exhibits (or is likely to in the future) characteristics of high quality red-cockaded woodpecker cavity trees: presence of red-heart fungus at average cavity height, 14 inches DBH or larger, high ratios of heart wood to sap wood, clear and straight boles and large, flat topped crowns with large limbs. Loblolly trees will usually start showing incidence of red-heart at 60 years of age (five percent of trees) and the incidence quadruples by age 100.

PRESCRIBED BURNING - A controlled application of fire burning under preplanned, specified conditions to accomplish specific planned objectives of forest or wildlife management and fire hazard reduction.

RECRUITMENT STAND - A stand, at least 10 acres in size, identified as potential nesting habitat required to meet the identified population goal on a compartment basis. Recruitment stands are located between 1/4 mile and 3/4 mile of a colony site. Foraging habitat allocation is required for recruitment stands.

RELICT TREE, (Relicts) - A pine tree which is left over from the original forests cut over during the period from 1890 - 1930. They are usually more than 100 years old and exhibit characteristics of high quality red-cockaded woodpecker cavity trees: presence of red-heart fungus (rotor decay) at average cavity height, 14 inches DBH or larger, high ratios of heart wood to sap wood, clear and straight trunks and large, flat topped crowns with large limbs. Most of the red-cockaded woodpecker cavity trees are relicts.

REPLACEMENT STAND - A stand, at least 10 acres in size, identified within 1/2 mile of a colony site as replacement nesting habitat for the existing colony. The closer the replacement stand can be placed to the colony site (other factors being equal) the better, with the ideal being adjacent to the colony site. The number of replacement stands will equal the number of active and inactive colonies. Foraging habitat is not required for replacement stands because they are replacement nesting habitat for an existing colony with foraging habitat already assigned.

SEED-TREE - A cutting method within the evenaged silvicultural system, whereby the old stand is removed in one or several cuttings except for a small number of trees left singly, in small groups or narrow strips, as a source of seed for natural regeneration. The seed-trees may be removed after the stand has been successfully regenerated.

SHELTERWOOD - A cutting method within the evenaged silvicultural system designed to regenerate a new evenaged stand. The existing stand is removed in a series of two or more removal cuts. New regeneration is sheltered or protected by the residual overstory until regeneration is successfully established.

SPARSE STAND - A stand whose basal area of desirable growing stock per acre is less than shown in the table.

Total Height	Minimum Basal Area		
3 6-65	30		
66-95	40		
95+	50		

STAND - Trees that grow in the same location and which are fairly uniform in type, age and risk classes, vigor, stand-size class and stocking class. The similarity of these qualities distinguish the stand from adjacent stands that contain trees with different features.

SUITABLE HABITAT - The most appropriate habitat for a given species of plant or animal.

SUITABLE RCW HABITAT - Consider southern yellow pine (except sand pine) and southern yellow pine-hardwood types as potentially suitable RCW habitat. Suitable RCW foraging habitat is pine and pine-hardwood stands 30 years or greater in age, while suitable nesting is considered pine and pine-hardwood stands 60 years or greater in age or younger stands containing scattered or clumped potential cavity trees or relicts.

Pine Types

Pine-Hardwood Types

Longleaf pine Slash pine Loblolly pine Shortleaf pine Virginia pine Pond pine Pitch pine Shortleaf pine-oak Loblolly pine-hardwood Slash pine-hardwood Pitch pine-oak Virginia pine-oak Pond pine-hardwood

THINNING - An intermediate cutting operation performed by removing excess trees from a stand and is designed to promote a growth response on the residual trees and to salvage mortality.

3/4 MILE ZONE - The National Forest lands around a colony site which will be managed under this policy. This zone is a 3/4 mile radius circle from the center point of the colony site and would include approximately 1,117 acres if all lands in this circle are National Forest. In practice, this zone might not be a perfect circle because of private lands or topographic features, vegetation types and administrative boundaries in which the zone boundary can be tied to facilitate on-the-ground administration of the policy. The 3/4 mile area is divided into two zones. These are within 1/4 mile of a colony center and between 1/4 and 3/4 mile of the center. Suitable foraging habitat within 1/4 mile of each colony is critical in sustaining that colony. Suitable nesting habitat within 3/4 mile of each colony is recommended by the Forest Service Wildlife Habitat Management Handbook (FSH 2609.23R) and the RCW Recovery Plan to enhance colonization and provide for recruitment. Because RCW management objectives are different in each zone, they are identified separately and specific habitat management direction and mitigation measures are provided.



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